



Controversies in Relation to Pyorrhea Alveolaris.

By B. F. ARRINGTON, D.D.S., Goldsboro, N. C.

It is often the case that physicians treat diseases successfully when they do not definitely comprehend the true cause of the disease, make but few blunders, and obtain generally good results. In the face of such facts, why shall dentists dispute so much about the cause and differ so greatly as to treatment of this or any other disease within their range of privilege to treat? Why not, like physicians, accept remedies that are effective, and which have proven reliable and treat in harmonious accord, whether cause be known or not? More credit would come to the profession; the physically afflicted would unquestionably fare better at our hands, and would hold the profession in higher esteem.

When we treat a disease, whether familiar with or ignorant of causes, relief and cure are the results desired, and if obtained, we should be satisfied, and proceed in like cases on same successful line of treatment, whether it be in accord with what may be termed "advanced ideas of practice" or some "old woman's idea." It will be all the same to patient, whose interest chiefly is to be considered. Dr. Frank Abbott spoke wisely when he said: "What does scientific treatment really consist of? As I understand it the crowning point of all scientific treatment is the result. If the result is favorable, then we want nothing better in the way of science than that, so far as treatment is concerned."

We must not strive to soar too high in our efforts to aggrandize our noble calling; we may get above the true line of usefulness, and the results of our professional efforts will not be as effective as if pursued on a more conservative plane of action.

Before commencing to treat this disease, the first thing to be considered is to be certain that diagnosis is correct. The next step in a case well advanced, is the use of scalers and thorough removal of deposits

from the roots of teeth, after which but little treatment or professional attention is required, and but few remedies are needed. A cure will be the result in a large percentage of cases.

It is much to be regretted that some men in the profession, well advanced in practice and highly favored with rich opportunities for testing theories and practice, will venture to speculate as they do, in discussing this disease. There seems to be no agreed line of thought, but rather divergence as far as possible one from another as to cause and treatment.

**Varying Views of
Various Men.**

One, advanced in years and distinguished as an educator in dentistry, has for some years advocated the wild theory that pyorrhea always commences at the apex of the roots of teeth, and that constitutional treatment alone is requisite, and will cure. A more unreasonable and untenable position could not be taken. No good argument can be produced to sustain such a position. By reflecting upon the subject for a moment, any one who has had even limited experience in treating the disease, can readily perceive the unreasonableness of such a theory. No medicine known to man administered internally will dissolve or remove pyorrheal deposits on the roots of teeth in a well marked case of the disease; neither will acids applied locally; nor can a cure be effected until the deposits are removed.

Then comes an advocate of kill or cure and says, "Treat it as you would a cancer, burn it out and let it alone." Beautifully heroic.

Another prominent teacher of dentistry proclaims that he "has always advocated that pyorrhea was a constitutional disease," but in course of argument he enumerates a dozen or more local causes, and for treatment, names more than fifty remedies. He also says that "modern dentistry has most to do with the cause." A random idea and an assertion that cannot be sustained. The disease is most prevalent where dentistry is least practiced, proof positive of his error. He also questions the necessity for "removal of deposits from roots of teeth." Pretty good evidence of ignorance of the true nature of the disease, and the effect of the deposits. He further states that "the age at which the disease begins favors those over forty years." Such a statement is convincing evidence of ignorance. I have been treating the disease for thirty-five or forty years, and am confident I have never seen a case in the incipient stage after the age of forty, and I question very much if any dentist ever has. Such blunders are inexcusable.

Now comes another teacher of dentistry, and with a few followers, proclaims that "the only cure is the extraction of teeth." A position too extreme to admit of comment.

Another says, "It is confined absolutely to middle life, and we do not find it in young subjects, nor associated with poor teeth, and teeth liable to decay," and further adds, "I cut off the pyorrheal teeth and put on bridge work to save them," and then exposing greater ignorance, "I think the root of the trouble lies in the dental pulp." I think it doubtful if he ever saw a genuine case of pyorrhea.

Dr. Cowardin, of Richmond, Va., proclaimed well when he said, "We must not get the idea that placing a bridge upon an affected tooth is adequate treatment of Rigg's disease. It will not tighten this class of teeth, except temporarily, by the treatment needed to get them into condition to receive the bridge."

Now we have the senior professor, ripe in years and experience, who proposes the uric acid theory, and will not agree that the disease begins in the gum tissue, but says "he knows very well that in the treatment of the disease you must first attack the pathogenic germs which exist around the gingival border if you are going to have success." Rather inconsistent I think for one of his age and experience, and a professor, too, in a dental college.

Another, prominent, and doing an extensive and lucrative practice, says, "I don't believe all cases of pyorrhea are from the same cause. I have thought the inflammation was the result of the *density of the roots* sometimes." Indefinite and a little shaky on the subject.

Then comes in for a share of glory as an extremist, a dentist well known to the profession from Maine to Mexico, an ex-president of the Southern Dental Association, and says he "will give a thousand dollars to any dentist who will treat and cure a case of pyorrhea for two years." With such a proposition he cannot and does not, I presume, treat the disease. Now rally and combine ye advocates of the uric acid theory, and add largely to the already accumulated, conflicting and confusing theories. Then follows absurdity upon absurdity expressed through journals and in meetings.

In *Welch's Monthly*, June issue, 1897, page 686, quoted from the *Dental Cosmos*, will be found the following: "Cataphoresis—Treatment of Pyorrhea."—"Six minutes application of the current, with ten volts and two and one-half milliamperes so anesthetized the soft tissues that the pockets could be cut open, the sensibility of the roots entirely disappeared, and with scalers cut into the pocket without causing the least pain." And in another journal is reported a case of cataphoresis experience as follows: "In the treatment of pyorrhea in order to remove the deposits that are well up under the gums, on the roots of the teeth, I have a copper blade made of wire 16 gauge. I wrap a few shreds of cotton around to hold solution of cocaine, and carry that well up under the gum around

the tooth or teeth. I use a pressure of 10 or 15 volts. Each tooth may require two or three minutes. By this method you will find to your delight that you can chisel and scrape away the deposits to the end of the root if necessary without any perceptible pain to your patient." Treatment out of all reason and more speculative than practical and about as impractical and will prove as non-effective of good results as the use of copper scalers for removal of pyorrheal deposits, recommended and used by a conspicuous member of the profession, who professes to have made the treatment of the disease a specialty for several years past.

With such diversity of opinion, and theories so opposite and unreasonable, proclaimed by professors in dental colleges and others, what is to be expected from those whom they educate and send forth to practice? All can see that there is great range of theory and practice, and nothing definite to guide. Dental college teaching on the subject, so far, is non-agreed, and greatly at variance, ranging in treatment from internal use of mint drops to local application of the cautery.

Why not adopt one line of plain, matter of fact, practical ideas on the subject and treat accordingly? Accept the fact and act upon the basis that pyorrhea (gingivitis) is amenable to proper treatment and can be cured, but *may* recur, possibly will, if preventive treatment is neglected.

Iodoformagen Cement.

By OTTO BICKEL, D.D.S., New York,

Since the publication of my little article about iodoformagen cement in November number of last year's *ITEMS OF INTEREST*, I have received so many inquiries, that I resolved upon communicating with the interested parties *in pleno*. The reports of experiments made with formagen (*Deutsche Monatsschrift für Zahnheilkunde*) by practitioners on the other side of the Atlantic has furnished valuable material, to which I wish to give due credit.

Since its discovery formaldehyde was not heard of for about a quarter of a century, until its reappearance two years ago was greeted with enthusiasm by surgeons, and it naturally came into the hands of dentists who tried hard to make it serviceable for the profession.

Formaldehyde is a gas (CH_2O) gained by oxidation of methyl alcohol. It is commercially sold as a forty per cent. saturated watery solution called formaline, or formol. Even at an ordinary temperature

formaline gas escapes from the formaline, if the receptacle in which it is kept is not tightly closed. Gauzes, bandages and cotton exposed to the vapors of heated formaline are thus rendered perfectly sterile. It was found the most efficient antiseptic we possess, and was rightly appreciated on account of its lack of all poisonous qualities.

But as nothing is faultless in this world, so formaldehyde showed a very "shady side." Applied to wounds and mucous membrane it produces unbearable pain, which lasts often for hours. As a dressing for diseased pulps, it was an unquestionable success, but the accompanying severe pain stamped its application to be a rather "heroic treatment."

After many resultless experiments, Abraham (Berlin) succeeded in producing a cement which he called formagen, the powder and liquid of which was saturated with formaldehyde. This cement proved to have all the desirable qualities of formaldehyde, without showing any tendency to produce pain. Its application was described in my above mentioned article, and I will now proceed to relate my experience since.

When I submitted my first article to the editor of *ITEMS OF INTEREST*, I met with a caution. Dr. Ottolengui, expressed his scruples as to the final value of the preparation as a saving agent for inflamed pulps. Nevertheless, the article was published, and I am happy to say that I remain a strong advocate of the excellent qualities of the iodo-formagen cement.

**Iodoformagen
in Practical Cases.**

Highly inflamed pulps, capped with the cement and filled during the same sitting, recovered and showed life eight months after the treatment. They were sensitive to sudden change of temperature.

Seven months ago I used the cement on the mesial surface of an upper central, and when, some weeks ago, I prepared the distal cavity of the same tooth in order to fill it, the sensitiveness of the dentine was so intense that I applied guaiacocaine, cataphoretically. The tooth was alive.

Another interesting success could be recorded in a case of pulpitis *acuta ulcerosa*. The tooth was an upper second bicuspid. Patient could not point out the aching tooth, nor was he able to tell on which side the tooth was located. He complained of "general toothache," which grew worse when he went to bed. The examination showed a mouth with healthy teeth, one upper bicuspid extracted, the three others filled with amalgam. The one standing alone was found to be the offender. The removal of the filling revealed the cause of the pain. The dentist who had filled the tooth, had probably overlooked a minute opening leading to the pulp-chamber, and the consequence of it was a little ulceration which had formed under the odontoblastic layer. By careful

application of the syringe filled with a warm, weak solution of lysol in water, the pus was removed and the cavity dried with aseptic cotton. A cap of iodoformagen cement was applied with necessary precaution, and the tooth filled with gutta percha. The pain stopped, patient could sleep, and there is no apparent indication that the pulp has breathed its last, for the tooth shows reaction against changes of temperature when tested under application of rubber dam.

This being the only case of pulpitis *acuta ulcerosa* coming under my care where I applied the iodoformagen cement, I will certainly not build up a theory on so weak a foundation—I merely relate my experience.

The action of the formaldehyde on the pulp tissue is explained thus: The red blood corpuscles retract and the tissue becomes hard, but very soon we find a *restitutio ad integrum*, and after the elapse of four weeks the pulp resumes its normal functions.

As an application for antiseptic treatment of the root, formaldehyde is infinitely preferable to all other disinfectants. It possesses sufficient disinfecting power to sterilize at once any root canal without discoloring the tooth, and without affecting the hard substance of the tooth.

It seems to be strange that the hardened iodoformagen cement does not lose its disinfecting properties, but experiments made by Abraham (adopting W. D. Miller's method) proved distinctly its germicidal efficacy.

In concluding the article let us sum up:

In case iodoformagen is the realization of the conservative dentist's dreams, we will all join in the chorus of the festive hymn and shout "Eureka!"

But should it not fulfil our principal desideratum, and merely mummify the lamented pulp, we will amputate (what a big word) the diseased part of the pulp, and formaldehyde "will do the rest."

Then we can do away with the troublesome removal of pulp remains in inaccessible canals, and avoid all the unwarranted and complicated methods of filling those canals.



A Method of Repairing Richmond Crowns.

By DR. T. LEDYARD SMITH, City of Mexico, Mexico.

To repair one of the four superior incisors that has a Richmond crown from which the porcelain has been scaled or broken, perhaps by too prominent occlusion with an inferior tooth, the following method is suggested to save removing the gold fixture and pin, which may be difficult if the pin be close fitting and of platinum:

Cut a longitudinal slot in the remaining backing, cutting with a file so that the under side will be wider than the top, of the dovetail order. Select a tooth that will be as thin as the one broken, and with longitudinal pins, to which solder a little platinum trough or box the shape of the dovetail slot in the backing. A long, narrow piece of platinum should be fitted over the pins and the pins spread slightly to hold it; paint this with borax cream, also the inside of the little platinum box, which will be wide across the top and pressed in close to the pins at the plate. Solder, and finish with file to conform to the slot. Set it with cement.

If done accurately, it will be neat, strong and serviceable, and the neck will fit under the band as before.

Inter-Alveolar Administration of Eucaine.

By DR. STEWART J. SPENCE, Harriman, Tenn.

My best results in the administration of eucaine have been when injection has been made into the alveolar process. By this means it appears that the solution reaches the pericemental membrane better than when injected into the gums.

As an ordinary sized hypodermic needle is too frail for this operation (its point becoming blunted and blent, even if the stem does not break) recourse is had to the larger sized needle used by veterinary surgeons which, when cut off at, say a quarter of an inch from the reinforcement portion of the needle, is strong enough to penetrate the outer wall of the alveolar process.

But as the piercing of the gum by a needle of this size is itself rather painful, the writer first injects the gums with a fine needle in the old-fashioned way, at about an eighth of an inch from the gingival margin. This preliminary injection not only prepares the way for the

more severe one, but also for the lancing, which is painful when injection is made only into the alveolus.

The penetration of the alveolar process is usually made at about a quarter of an inch from the gum margin, and on both sides of the tooth; the palatal side being perhaps the better. Where there is chronic abscess present, the syringe point is, if possible, driven into it.

I have noticed no bad results from this practice during the three or four months of its employment. The dosage, ordinarily used, is about fifteen to twenty drops of a five per cent. solution. This dose has never in my hands, during nearly a year's use of it, caused the slightest systemic effect, not even a brief giddiness; whereas ten drops of a two per cent. solution of cocaine frequently caused trouble in previous years.

Euthymol.

By J. HENRY MORGAN, D.D.S., Salem, Va.

This preparation introduced by Parke, Davis & Co., is one of the best compounds yet offered the dentist. It is a clear liquid with an agreeable odor and taste, composed of the best antiseptics that can be used in the mouth. It is non-toxic and therefore of especial value to the dentist. The formula given shows it to contain to the fluid ounce,

Oil of eucalyptus.....	3— 8 minims
Oil of gaultheria.....	9—32 minims
Thymol	15—32 grains
Menthol	5—64 grains
Boric acid	10.15.16 grains
Fluid extract wild indigo.....	1.1.4 minims

It may be used as a spray, gargle or internally in doses of one fluid drachm (4 cc.) three or more times daily. Its action when applied to the mouth is not irritating, and it is not in any sense injurious to tooth substance. It may be used freely as a mouth wash, general detergent, or for cleansing the hands before or after operating, or wherever an antiseptic is desired.

The oil of eucalyptus is eminently antiseptic in its action and is employed in the treatment of foetid breath, ulcers of the mouth and throat—syphilitic or otherwise spongy and bleeding gums, and in catarrhal conditions, etc.

The oil of gaultheria being stimulating, astringent and antiseptic in its action, also prevents putrefactive fermentation, making it valuable in the treatment of dental affections.

Thymol is an excellent antiseptic, being more powerful, permanent and less poisonous than carbolic acid, while its fragrance renders it more acceptable for use in the mouth.

Menthol being analgesic in its action, its use here is of service where there is pain or soreness of the gums. It is used too as an antiseptic inhalant, and as a valuable germicide in scarlet fever, diphtheria, etc.

Boric acid is a well known mucous astringent and antiseptic.

Wild indigo (*baptisia tinctoria*) is astringent and antiseptic in its action, and is used principally on account of its antiseptic virtues.

I have used euthymol as a mouth wash in follicular stomatitis, in simple and alveolar stomatitis with marked success, diluted to suit the various stages of the disease, the prescription usually given being,

℞ Euthymol	2 drachms
Glycerin	2 drachms
Rose water	2 drachms

As a wash after removing calculus, and as an antiseptic wash during the treatment of pyorrhea alveolaris, diluted to suit the indications, it will be found very efficient, and where many teeth have been extracted, it is advised as a mouth wash not only preventing foetor of the breath, but by its astringent and antiseptic properties promotes rapid healing of the gums.

As an astringent mouth wash for spongy and bleeding gums, and to retard the gradual recession of the gums in the aged, I have found the following of great service.

℞ Euthymol	1 drachm
Tincture red gum.....	½ drachm
Rose water	3 ounces

As a daily mouth wash, this compound will keep the mouth aseptic and destroy the germs of fermentation of vegetable or animal food, and I consider it valuable for use in the mouth, either alone or combined with such other medicaments as the case requires.





Eye Strain and its Correction.

By W. H. SNYDER, M.D., Brooklyn.

Read before the Second District Society, November, 1897.

Anatomy of the Human Eye.

The human eye is placed in a bony cavity, called the orbit, and is further protected by a fatty cushion within which it rests, as well as by the brows, eye-lids and eye-lashes. Other appendages are the tear glands and the sac and duct used to drain away the excess of tears, the membranes and the muscles that direct its range with the blood vessels and nerves which supply it.

It is a sphere with the segment of a lesser sphere implanted upon its anterior surface. Its anterior-posterior diameter is about one inch; transverse diameter about eleven-twelfths of an inch; the larger sphere occupies about five-sixths of the globe, and the anterior segment about one-sixth. It is invested with three coats, sclerotic, choroid and retina. The first is a tough fibrous membrane forming the white of the eye, visible through the delicate transparent conjunctiva which covers its anterior portion, and is reflected over the inside of the lids. The muscles are attached to it and through its sievelike cribiform fascia it transmits the filaments of the optic nerve, and the vessels supplying the retina. The anterior sixth of the eye, completing the outer covering of the globe, is a transparent segment, known as the cornea.

The second, or choroidal coat of the eye, is composed of the iris, ciliary process and muscle. It is a vascular layer, lining the sclerotica and separated from it by the delicate membrana fusca; it is composed of three layers.

The ciliary processes are folds running forward from the choroid, to the suspensory ligament of the crystalline lens. They number about seventy, merging themselves into the ciliary muscle and iris. The latter is the colored curtain surrounding the pupil, and it contains both circular and radiating fibers. It is through the action of this ciliary muscle

on the crystalline lens that the eyes are accommodated to distinct vision at different distances.

The third or inner coat of the eye, on entering the sclerotic ring, spreads itself out over the posterior inner segment of the sphere, between the choroid and the vitreous, extending forward to the equator, losing itself in the ora serrata.

It has not been more than fifty years since glasses were accurately fitted to the varying conditions of the eyes requiring their aid. Previous to the above time, all persons desiring assistance for their eyes, were relegated to a watchmaker whose only stock of scientific knowledge consisted in purchasing his material to be exchanged to the victim for so much cash.

The invention of the ophthalmoscope by Helmholtz in 1851, made it possible to examine the interior of the eye, and determine with accuracy the presence or absence of disease.

But it remained for the great master mind of Doudius to place the subject of ophthalmology upon a scientific basis. His great classical work written in 1854, was and remains the foundation of all ophthalmological advances. He was able to take from the subterranean vaults of inaccuracy and transform into the coin of scientific actuality.

How Sight is Produced. The mere action of rays of light is not sufficient to secure the actual perception of the objects from which they proceed. Of other conditions necessary

for the formation of an image, the most indispensable for distinct vision, is that the divergent pencils of rays emerging from any one point of the object shall be brought to its proper focus on the line with the retina, at its most distinct perceptive point, which is in a line with the optical center of the refractive media of the eye.

But if the object in question be so near the eye, six or eight inches, that the power of the lens is unable to bring the pencils of light to a focus; or if the pencils from a distant object, come in contact with a lens too powerfully convergent, they are focalized and again dispersed before reaching the retina, no distinct perception having taken place, but only a sense of light or brightness of a greater or less degree.

All sight is obtained by the reflection of light from luminous bodies upon the retina of the eye, through its focal apparatus, cornea, aqueous lens and vitreous; and, therefore, any excessively luminous body only dazzles the eye, the impressions not resulting in the perception of the object, but often in pain, and very frequently causing a positive injury to the structure and sensibility of the retina.

Though the human eye is capable of seeing objects both at great and small distances, yet most persons desiring minutely to examine small

objects, usually bring them within a distance of eight or ten inches, in order to increase the visual angle which subtends the object.

But presbyopic and highly hyperopic eyes, which lack ample convergence, find this impossible, and must of necessity remove farther away to obtain distinct vision, or attain the same end by artificial means, increasing their power of convergence and bring the object within a comfortable distance to the membrane of sight. On the other hand, when the condition of too rapid convergence obtains by the increased thickening of the lens or the undue elongation of the anterior posterior axis of the eye, the object must be brought close to the eye so as to carry the impressions of the image back to the retina. This condition is known as myopia or short-sightedness, and is remedied by concave glasses.

In providing for accurate vision under different circumstances, a very important element is dilation and contraction of the pupil of the eye or rather the contraction and expansion of the curtain of the eye, known as the iris; when exposed to strong light which would be so intense as to confuse the perceptive power of the retina, and produce indistinct vision, the pupil contracts, shutting off a portion of the rays, thus reducing the amount of light to that which can be agreeably borne by the retina.

In some of the lower animals, whose vision adapts itself to extreme conditions of light and darkness, as in the cat species, the variations in the size of the pupil is exceedingly marked. Notwithstanding the perfection of our visual apparatus, there is only a small space directly in front of the eye within which small objects can be distinctly seen. Outside of this space, there is a field or circle of considerable extent, within which we can perceive indistinctly the presence of luminous objects, which is called the field of vision.

The field of vision of man, within its extreme limits, subtends an angle of about 180 degrees, the angle varying to some extent, according to whether the eye-ball be deeply placed in its socket or shallow. In some of the lower animals the field of vision is much more extensive, in some approaching a range of nearly a complete circle. The distinctness of vision depends upon the accuracy with which the rays of light diverging from all points of a luminous body are brought exactly to a focus at a level of the sensitive membrane destined to receive it.

The most important and efficient of the refracting parts of the eye, is the crystalline lens, a biconvex transparent body of considerable density, placed immediately behind the pupil, and some distance in front of the retina. As the original divergence of rays from a luminous object passing through the pupil, varies with the distance, the crystalline lens, if both its refracting power and position remained the same could not

bring the rays to a focus at the same point behind it for luminous objects at varying distances.

This difficulty is met in telescopes, microscopes and opera glasses by shifting the relative distance of the object-glass and eye-piece. In the eye the correction is accomplished by a change in the form and thickness of the crystalline lens, by the means of the internal muscular apparatus of the eye. Spectacles are contrivances worn to assist the eye in its adjustment to clear vision or the protection of the eye.

These may operate in two ways; first by the correction of some optical defect, and secondly, by compensation for functional inefficiency on the part of certain weak muscles concerned in the exercise of sight.

For the perfect sharpness of this image, the curves of the lenses must be perfectly symmetrical, and the refractive power of the system exactly adjusted to the distance of the retina. In the emmetropic eye these conditions obtain, the adjustment being such that when the eye is at rest the rays from distant objects come to an exact focus upon the retina.

**Abnormal
Eyesight.**

Myopia is an undue depth of the organ from before, backward, or an increase in the refractive power of the lens, by increasing its convexity or its density. The undue length of its anterior posterior diameter is by far the most common cause of myopia, and is most generally the result of disease of the tunics of the eye at their posterior pole, or, rather, scleral ring, which causes the tissues to stretch and bulge backward. However it may be produced, the correction of myopias is the same, the remedy being to weaken the refractive power of the lens by means of concave lenses, using due care to not over-correct your patient, and rather to under-correct them. There are many physiological reasons why full correction of this defect is often improper or is useless, and no myopic eye should ever be corrected with a lens of any kind except under competent advice, after a thorough examination of the eye, both subjectively and objectively.

The most common visual defect is a condition just opposite to the above, which we have just described, wherein we find that the refractive power of the lens is disproportionately weak to the distance of the lens from the retina, and the image of the object comes to a focus behind the retina. This constitutes the condition known as hyperopia, and as in myopia is a deviation from the normal, which may be in the refractive power, or in the depth of the eye; the above is quite a common condition and is usually due to an undue shallowness of the eye.

In old age, and in all conditions where the crystalline lens has been removed, as after removal of cataract, a high degree of hyperopia, or,

rather, a condition must necessarily result. This faulty condition of the refractive power of the eye must of necessity be compensated by some exterior artificial method, which is done by lenses in frames placed closely in front of the eyes of a strength proportional to the existing refractive imperfection.

We have also the condition known as anisometropia, or a difference in the refractive power of the eyes. Where only one eye is used, its anomaly may be corrected; but where both are used, and of equal or nearly equal visual strength, their correction presents a more serious problem.

The most common condition requiring the use of glasses is presbyopia, and is due to the recession of the near point from the eye, which should not be confounded with hypermetropia which is a congenital condition, while the former may be known as old sight, and is an acquired condition, and is due to a change in the refractive power of the lens. The ciliary muscle acting upon the crystalline lens is known as the agent of accommodation, causing it to become more convex or less convex as the condition may be desired. We may also have a condition known as astigmatism, which may be either myopic or hyperopic, and may be compound or simple, and which condition is generally due to the asymmetrical condition of the cornea, and wherein the radii of curvature in one meridian may be weaker or stronger than in a corresponding condition at right angles to it.

This refractive error may be remedied by glasses, and is a want of symmetry of the cornea, where there are two opposite meridians of unequal curvature. This condition is generally a congenital malformation, but may be the result of traumatism either surgical or inflammatory. The consequence of it is, that the retinal image, whether for far or for near objects, is never sharp. For this correction a glass is worn, having a cylindrical curve, equal to the difference in curvature between the two dissimilar meridians. The axis of the cylindrical surface is carefully adjusted so as to be at right angles to the meridian to be corrected. The nature of the curve of the correcting glass will depend on whether the refractive power of the meridian to be corrected, requires to be strengthened or diminished. As it is obvious that this irregularity of the corneal curvature may coexist with a general hypermetropia or myopia a compound glass may be required, the cylindrical glass necessary to neutralize the astigmatism ground on one side of the face, and on the other the proper spherical curve for the correction of the other defect.

As we have mentioned above, the most common condition where glasses operate to assist the sight, by compensation for failure of certain muscles concerned in the use of the eye, to fulfil their function, is due

to the want of power to focalize the eye upon near objects. This faculty resides in a little circular muscle within the interior of the eye, by the action of which the convexity and thus the refractive power of the crystalline lens is increased temporarily.

But as we increase in age, the substance of the crystalline lens steadily grows harder, and less viscid, and thus less and less compressible, so that the same amount of muscular action comes to produce less and less response, so that in adult life the focalizing power gradually but surely diminishes, more rapidly in some and less in others; and hence the nearest point of distinct vision recedes farther and farther from the eyes, until at the age of forty it has extended beyond the distance for convenient use of the hands.

All close work regarding sharp vision of small objects at the customary distance then becomes impossible or difficult without artificial compensation for the failure of the focalizing power. This condition, which is natural to all eyes, is called hyperopia or hyper presbyopia, and as the focalizing power continues to decrease, the strength of the glass must steadily increase, as soon as presbyopia begins to show itself. And the proper glass should be promptly assumed, as only injury to the eyes, or at least useless inconvenience, can result from such a fruitless struggle without the required aid.

In all cases the strongest glass, with which ordinary fine print can be clearly and comfortably read at the usual distance, is the proper glass to prescribe. With normal eyes, and when I say normal, I mean emmetropic eyes, or eyes without any refraction, other things being equal, always take nearly the same strength glass in individuals of the same age, the exception being where the accommodation is excessively weak from sickness, etc.

In myopic eyes, for obvious reasons, the glass will be weaker in proportion to the degree of the optical defect, while in the hypermetropic and presbyopic the glass will be correspondingly stronger.

This same inability to focalize upon near objects may also occur at any age, from inherent weakness, or paralysis of some one of the muscles concerned in accommodation or focalization. In such cases, glasses will usually be needed for near work, as in true presbyopia. It was probably due to the necessity of compensating for the above condition that led to the discovery of the use of convex glasses for near work.

We very frequently have a weakness or want of balance of the muscles which rotate the eye-ball in its socket. In such cases the fixing of the two eyes on the same point, for any length of time, is attended with a feeling of strain or actual pain, followed very frequently by intense headaches, and upon prolonged effort the overtaxed muscle may

suddenly relax, producing immediately a temporary confusion of sight. Here if the insufficiency is very slight, a weak prism properly adjusted may compensate to some extent for the defective weakness; but this mode of compensation will only apply to a very slight degree of muscular weakness. In the high degrees a marked degree of allination may be obtained by a surgical operation. I may say in the way of parenthesis that I have no patience with so-called graduated tenotomies, which are recommended and performed by certain ophthalmologists.

The strength and position of the prism used, will, of course, be determined by the degree and seat of the muscular weakness. As is often the case, the affection in question may be associated with myopia, hyperopia or astigmatism, when the prisms must be ground on the spherical or cylindrical lens required to correct the refractive anomaly.

The material commonly used for spectacle lenses is glass, but a variety of rock crystal known as Brazilian pebble, is sometimes used. The only thing in favor of pebble glasses is that they cost more, and there are many reasons against their use over a good quality of flint. It is true that they do not scratch easily, and it has been claimed by some that they do not mist so readily when changing from cold to a warmer temperature, and they are heavier. The claims set forth that they preserve the sight are fanciful, and are only the ammunition of the quack; and many of the glasses sold for pebbles are not pebbles at all.

It is always important that lenses used for correcting the sight should be of the best material, without flaws and accurately ground. All glasses worn, should be accurately tested by a movement to and fro, for the presence of flaws, and if there is any evident flickering or distortion of objects, seen through the glass during this performance, the glass is worthless for the use intended, and should be at once rejected.

In choosing the frame which is to hold the lenses, of which there are a great variety, one should attend the optician in person, as he would the shoemaker in selecting a pair of shoes, and not delegate the matter to some one else, in order that you may obtain a proper adjustment and fit. The frame, whether spectacle or eye-glasses, should be selected to suit the conformation of the face, and the purpose for which it is intended; being careful that the line of sight should be through the center of the glass, and perpendicular to its surface.

In order to meet a condition which requires glasses for distance and near, a style of spectacles was invented by Benjamin Franklin, which was bisected horizontally, the two segments being of the different curvatures required, the upper focus for distance, and the lower for near.

To shield sensitive eyes from excess of light, smoked glasses, either

with plane or curved surfaces, are used. The latter gives the most protection as they cut off the side light more completely. Other colors than that of smoked, should not be used, and smoked should only be worn on the advice of a competent physician, because unnecessary protection of the eyes only increases their sensitiveness, and very frequently engrafts upon them a vicious habit which in the nervous is exceedingly difficult to correct.

An optical instrument used to assist or correct defects of vision was probably unknown to the ancients. Some have supposed that they must have been acquainted with such artificial aids, but there is no historical evidence that that supposition was well founded. There is no authentic history of the use of artificial aids to assist the sight previous to the latter part of the thirteenth century, which is probably the period of their invention by Roger Bacon, who mentions having used a magnifying glass to aid him in some of his work. And he is probably the first one to learn of their convenient and useful properties.

I do not mean to convey to the audience here present that all persons should be spectaclled, but I do wish to impress upon you the importance of correcting refractive defects of the eye, when they produce any discomfort. It is much better to let dead glass do our focussing, than it is to try to induce the muscle of accommodation to plod along under an irksome load under which it must sooner or later break down, leaving the eyes sensitive for some months, even though they be corrected with the proper glass to relieve the strain.

Very few people consider the light that they use for reading, whether it is reflected directly in the eye, or whether shadowed by their position with reference to source of light. Proper positions are generally known but rarely regarded. Tight clothing around the neck, and dotted veils are never conducive to comfortable vision. Reclining positions beyond the angle of 30 degrees from the perpendicular, and reading on moving, jolting conveyances are not liable to increase visual comfort, and jumbled, ill spaced reading matter duly adds insult to the injury which you have already imposed on the eyes.



Secret Remedies.

By RODRIGUES OTTOLENGUI, M.D.S., New York.

Read before the Second District Society in Brooklyn.

The subject of this brief but I think timely and pertinent paper is secret remedies. What are secret remedies? There was a time when doctors acquired knowledge by experience, and kept to themselves the lists of remedies which they had found efficacious among their patients. This, considered by the ethical standards of today, would be reprehensible. But these men fully understood the actions of their drugs, or at least knew what drugs they administered.

Secret remedies of today are of a different nature. It is not the doctor, but the manufacturer who keeps the secret. What is the result?

At once we come to the pertinent point in our inquiry. The nostrum to which I shall devote my main argument, is the so-called obtundant. Human teeth are highly organized and endowed with the power of transmitting most exquisite pain. Consequently the visit to the dentist is always attended, mentally at least, with distressing sensations and anticipations. The alleviation of the pain of dental operations has been the legitimate quest of honorable practitioners during many decades. The pretense of solving this problem, has been the illegitimate game of unscrupulous persons with increasing frequency during the past ten years, so that at present the market is glutted with obtundants guaranteed to accomplish marvelous results. The dread of pain, so natural to the human being, coupled with these vaunted remedies which annihilate feeling in the teeth, has proven a tempting opportunity for the so-called advertising dentists, and it is not uncommon to find a "Dental Parlor" bearing the name of one of these "Dental Obtunders." Thus I may approach the subject, in bringing it to the attention of an ethical body of dentists, from two standpoints; the selfish, and the strictly ethical.

It is idle for the ethical practitioner much longer to feign an indifference to the increasing prosperity of the dental shops which are now dotting all metropolitan centers throughout our country. And let me pause here to state most emphatically, that I do not deny the right of any man to advertise his dental office, if he prefers to practice in that fashion and is willing to be ostracized from professional fraternity. But fraud is fraud, whether occurring in the most ethical or the most unethical of dental offices, and I have information of the practices daily occurring in "Dental Parlors" in New York and Brooklyn which should make the

proprietors amenable to punishment by imprisonment. If their misdemeanors are not as yet defined in our code of criminal laws, then the sooner new laws are enacted the better for the community.

One of the greatest frauds is the use of these secret remedies. One of two facts must exist. Either the remedy contains drugs so powerful that no man should administer them in ignorance, or else the ingredients, being wholly harmless, the potency is purely imaginary, and the claims for the efficacy of the preparation is a means of fraudulently relieving the patient of the contents of his pocketbook.

Nevertheless it is a fact, that the vast majority of the "Dental Parlors" in this country hold out as the chief inducement for patronage that they practice "painless dentistry." One has a medicine invented by "a celebrated professor who at great expense has been engaged to work in these parlors and who daily extracts teeth for thousands, all of whom report no pain, and are so delighted with the novel experience that they come back and have other teeth extracted just for fun." In another place the "only reliable obtundant" is used, this place having exclusive rights, and all others being fraudulent imitators. In a third "parlor" the fly is invited in to have his tooth out free, and is guaranteed "no pain or money refunded."

**Painless
Bridge Work.**

It is amazing, but it is a fact, that these offers attract custom, and the patrons are not at all of the lowly or ignorant class. I know a man, one of the most reputable of my acquaintances, who was beguiled by the literature sent forth from one of our metropolitan dental shops and intrusted himself into the hands of the man who guaranteed "painless bridge work." Hear his report of his experience:

"I had six lower front teeth in fairly good order, but the young man advised me to let him cut them off and make me a bridge. He promised not to hurt."

"Well, did he hurt?" I asked, interrupting.

"Hurt," he replied; "if there is any worse torture in hell, I pray that I may go to the other place. He sawed those teeth off and poked the nerves out with a stick, and then had the audacity to tell me, when I complained, that he 'couldn't understand it'—'never saw such sensitive nerves,' as mine. Well, he made the bridge and I paid him two hundred and fifty dollars for it. Within a year my teeth were all loose, and the whole mouth so painful that I was obliged to go back to him, when he had to take the whole thing out and make it over, which cost me another hundred dollars."

This gentleman, even when he told his story, had no realization of how he had been swindled. When the bridge failed, the dentist, if he

deserves such a name, removed it, *extracted the natural roots, ground off all of the gold caps from his crowns, took an impression and filled in the gaps with rubber, giving the patient for his hundred dollars about the clumsiest-looking imitation lower plate that I have ever seen.*

The existence, and the success of such persons is a menace to the future of dentistry. When honorable men fail to make a livelihood in dentistry, they will seek other walks of life; dental science will lose her students, the men who make the progress; and what is now a high art, will sink to the level of a trade in the hands of fakirs.

And, gentlemen, I regret to say you are helping the fakirs. When I say you, I am sorry to say that I mean you, or some of you of the Second District Dental Society. Some I have heard openly admit

Professional Men that they use a certain secret preparation, and I have been told of others who do the same. This society, however, is not the only one implicated. The Connecticut State Dental Society at its last annual meeting passed resolutions denouncing dental journals who admitted advertisements of local anæsthetics, and I have been informed by a dental goods salesman who was present, that *in the same hall, at the same meeting, within an hour of the passage of those resolutions he had sold out his entire stock of one of the most notorious of the secret preparations, and sold all to members of the Society who had loudly voted for the resolutions.*

These gentlemen may not realize it, but they are sharpening the axe which will cut off their heads. Their names are used as recommendation for the remedies. The salesman tells the young graduate that his nostrum is used by his late professor; the young man invests and so the pestilence spreads. So much, gentlemen, for the selfish aspect of this subject. Remember in future, that the money which you pay out for secret remedies, helps the manufacturer to continue selling his wares, and that these nostrums are the foundation stones upon which the whole edifice of quackery depends.

But there is a more ethical and a higher view point, and it is to this side of the subject that I invite not only your attention, but your co-operative action. It is within your power to set an example in this State which will attract the attention of the entire country, and in my humble opinion lead to incalculable good. The main point then is this: Is there any drug or combination of drugs known to the better class of dentists, which has the power of allaying sensation in sensitive dentine, which is not poisonous in its action? Can there be any valid argument against the proposition that no poison should be used in ignorance? Can it be right to administer an unknown poison, thus making it impossible to apply an antidote in case of injurious action? It seems to me that

these simple queries are unanswerable. Yet what do we learn when we investigate these nostrums? Eighty per cent. of them rely mainly upon cocaine; twenty per cent. of them contain arsenic; and nearly all contain either carbolic acid, or else sulphuric acid.

Would any of you like to have one of your dearly beloved children submit to the hypodermic injection of any combination of these drugs, the operator being ignorant of the proportions and even of the drugs themselves? I hardly think you would. Then what right have any of you to apply these unknown compounds either topically or by injection, in the mouths of the children of other men, children trustingly given into your care?

It is useless to prolong the argument. The axiom is simple. No reputable physician would administer a remedy without full knowledge of its name, proportionate combination, and therapeutic action. Any dentist who does so makes himself liable to the charge of being disreputable. But it is my purpose, if possible, to make him liable to a much graver charge. I wish him to be amenable to the law.

The following law has passed the legislature of Illinois, and is now operative:

**Illinois
Cocaine Law.**

The State Legislature of Illinois has enacted the following law respecting the sale of cocaine:
Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly. It

shall not be lawful for any druggist or other person to retail or sell or to give away any cocaine, hydrochlorate or other salt of or any compound of cocaine or preparation containing cocaine, or any salts of or any compound thereof, excepting upon the written prescription of a licensed physician or licensed dentist, licensed under the laws of the State, which prescription shall be filled only once: Provided, that the provisions of this section shall not apply to sales in the usual quantities at wholesale by any manufacturer or wholesale dealer, when such manufacturer or wholesale dealer shall have affixed to the box, bottle or package containing such cocaine, hydrochlorate or other salt or compound of cocaine or preparation containing cocaine, a label specifically setting forth the proportion of cocaine contained in any preparation. Section 2. Every person who shall be found guilty of violation of the provisions of this act shall, for the first offense, be fined a sum not less than ten dollars, nor more than fifty dollars, and for each subsequent offense not less than fifteen dollars, nor more than two hundred dollars, or imprisonment in the county jail not exceeding thirty days, or either or both, in the discretion of the court.

This law was not intended to have any especial effect upon dentists, but a careful analysis will show at once that it prohibits under penalty,

the sale by any retail druggist or other person of any combination containing cocaine, except upon a physician's prescription, while wholesale druggists are only permitted to sell the drug when the formula is printed on each package. Consequently if it could be shown that any dental goods dealer had sold a dental obtundant which contained cocaine, he would undoubtedly be amenable to punishment under this statute. I only introduce this as an accidental move in the right direction, considered dentally. It is not as drastic as the measure which I would advocate.

I am aware of the fact that as soon as I suggest dental legislation hands will go up, and protests will be sounded. "We have already gone to the Legislature often enough." "We have enough dental laws now." Well, I admit that, and I go further. We have too much dental law. The laws which we have, are directly responsible for the pseudo-respectability which the quacks enjoy, and much of their prosperity is due to the fact that our stringent laws have led the people to believe that there are no longer quacks. So, gentlemen, you especially who have helped along the legislation of the past, and who, however burdened with good intentions, are in some measure responsible for the evils which have grown from the seed which you planted, I appeal to you not to turn aside now, but once more lead us to the legislative halls, and now that your eyes are opened to the operations of your laws, endeavor to mitigate the evil.

The Second District Society has a member of the State Law Committee. I ask that that member be instructed to urge the introduction of the amendment which I shall here set forth, either as here drawn, or in similar effect.

In chapter five of the Penal Code section 217
Legislation Against defines assault in the first degree. The second para-
Nostrums Proposed. graph reads:

"A person who with intent to kill a human being, or to commit a felony upon the person or property of the one assaulted, or of another, administers to, or causes to be administered to, or taken by, another, poison, or any destructive or noxious thing, so as to endanger the life of such other is guilty of assault in the first degree."

The punishment for assault in the first degree is from five to ten years in the penitentiary.

Article 218 defines assault in the second degree, and the first paragraph declares that persons guilty of assault in the second degree who

"With intent to injure, unlawfully administers to, or causes to be administered to, or taken by, another, poison, or any other destructive or noxious thing, or any drug or medicine the use of which is dangerous to life or health."

The second paragraph includes those who

“With intent thereby to enable, or assist himself, or any other person, to commit any crime, administers to, or causes to be administered to, or taken by, another, chloroform, ether, laudanum, or any intoxicating narcotic, or anæsthetic agent.”

The punishment for assault in the second degree is from two to five years in the penitentiary, or a fine not exceeding one thousand dollars or both.

I have introduced these quotations from the Penal Code to demonstrate that the use of drugs, under specified conditions is considered to be criminal, and the punishment is severe.

Section 219 defines assault in the third degree, and there is at present but one paragraph which reads:

“A person who commits an assault, or an assault and battery, not such as is specified in the foregoing sections of this chapter, is guilty of assault in the third degree.”

I propose an amendment to Section 219 of the Penal Code by the addition of a second paragraph which shall read:

“Any person who administers, or causes to be administered to, or taken by, another, any poisonous drug or combination of drugs containing poison, or any local or other anæsthetic, the true proportions of which are unknown to him, is guilty of assault in the third degree.”

The punishment for assault in the third degree is imprisonment for not more than one year, or a fine not exceeding five hundred dollars, or both.

Many of these nostrums are patented, and it may be argued that such legislation as herein proposed, would be unconstitutional because militating against the patent rights granted by the United States. But this view would be erroneous, because it is specifically stated in the patent laws of the United States that all patents shall be subservient to the police restrictions of the several States of the Union.

In closing I urge the society to place itself on record by a vote. Either condemn the use of nostrums by taking some action upon the question, either as here suggested or otherwise; or else be honest enough to admit that our members are at liberty to use unknown drugs though it be contrary to the code, contrary to equity and, if right prevailed, contrary to law.*

* Unfortunately the stenographer failed to receive notification of this meeting and was absent consequently the discussion cannot be reported.—Editor.

Jurisprudence of Dentistry.

By ALEXANDER GRANT, Newark, N. J.

Read before the Central Dental Association of New Jersey, November, 1897.

In these days when society is highly organized and highly civilized, any man, at any time may find himself in the shadow of the law, in its courts; it may be as a plaintiff demanding his rights, it may be as a defendant opposing an encroachment upon his rights or defending some act done in the most sincere belief that he was doing right when he did the thing.

The learned professions are not exempt from this acquaintance with the law; physicians and surgeons in the course of a few decades past have had many transactions in the courts, and learned judges have filed many opinions and have outlined leading principles governing the relation which exists between the practitioner and those who repose trust in him, opinions sometimes prolix, if I may be permitted to say so, sometimes verbose; but out of this mass of learning I am asked tonight to collate, digest and present something for your consideration.

The cases which I shall cite are mostly surgeons general cases rather than surgeons dental cases; for the same law applies to both. In fact physicians and surgeons as well as lawyers come under like rules. They can sue and be sued, they can make partnerships and dissolve them, they can buy and sell the good will of a partnership with some limitations. The professional man can recover the value of services rendered to infants and married women when such services are necessary to the woman or child, just as a tradesman can recover for the price of necessities furnished.

The rules governing the admission of books of account as evidence are the same in all cases.

The law fixes no limit to the value of the services rendered by the surgeon dentist, when the value of such service is sued for, as it fixes no limit for the value of the service rendered by the physician or lawyer; the value of such service must be liquidated by the jury.

There is one disability placed upon the dentist in this State, and that is, the dentist cannot appoint a general agent to do his work for him unless this agent is also a duly qualified dentist; a like disability is placed upon all the learned professions.

These general principles, as well as many others, are too trite to need to be dwelt upon.

**Degree of
Skill Legally
Required.**

There is one principle, however, of which I wish to speak at some length and which applies to all the learned professions, and that is, that every dentist in performing an operation enters into a contract with his patient, and in that contract the law will imply a representation made by the dentist that he possesses that reasonable degree of learning, skill and experience which is ordinarily possessed by others of his profession having regard to the present advanced state of the science of dentistry. Also that he will use reasonable and ordinary care and diligence in the treatment of the case committed to him. Also that he will use his best judgment in all cases committed to him. Also that he will use his best judgment in all cases of doubt as to the best course to pursue in the treatment of the case.

And here it may be stated that the law never implies a warranty.

Lord Ellenborough, ninety years ago, in a decision still quoted said: "An ordinary degree of skill is necessary for a surgeon who undertakes a surgical operation."

In my opinion this was an easy rule for the practitioner.

Prior to Lord Ellenborough's day, Fitzherbert said: "It is the duty of every artificer to exercise his art rightly and truly as he ought."

I have not been able to find Fitzherbert's text, but I find his maxim often quoted with approval for its good, terse and quaint English.

In these later days the old doctrine of ordinary skill has been defined.

The leading case is that of *McCandless vs. McWha*. This case was heard on motion for a new trial. In the Court below, *McCandless*, a doctor and surgeon, had a verdict for eight hundred and fifty dollars recovered against him by *McWha* for unskilled practice in setting a broken leg. Upon motion for a new trial Woodward, J., who read the opinion for the majority of the Court, said: "The implied contract of the physician is not to cure, but to treat the case with diligence and skill. The question is, not whether the doctor has brought to the case skill enough to make the leg as straight and as long as the other, but whether he had employed such reasonable skill and diligence as are ordinarily exercised in his profession. For less than this he is responsible in damages. The rule is reasonable skill and diligence, such as *thoroughly educated* surgeons ordinarily employ. The law does not imply a covenant of warranty. The law demands qualification in the profession practiced, not extraordinary skill such as belongs only to few men of genius and endowments, but that degree which ordinarily characterizes the profession. The standard of ordinary skill is on an advance, and he who

would not be found wanting must apply himself with all diligence to the most accredited sources of knowledge." The motion for a new trial was granted, but not upon the ground of error below in any matter contradicted by the principles quoted from Judge Woodward's opinion, but because the Judge below charged the jury that a mason who built a smoky chimney could not recover for his work and that he was liable for damages, likewise an unskilful surgeon, etc. The Appellate Court held that the reference to the mason and his work in comparison with a surgeon was error, and directed a new trial on that ground.

This leading case of *McCandless vs. McWha* was decided in 1853, and the discursive style in which this opinion is written is now out of date pretty much everywhere except in this State.

Anticipating with prophetic eye a change in the style of writing opinions, the great Jeremiah S. Black, Ch. J., annexed the following remarks to Judge Woodward's opinion: "We all concur in the law of this case. The Judge in his charge fell into an error in stating the amount of skill required in the treatment of the case. We reverse for that reason, but when we decide the legal point we are done with it. We are not authority on questions of surgery. I think it necessary to say this in order to prevent the Court below on second trial from supposing that we intend to give them instructions on matters in which we have no jurisdiction."

Now, to recapitulate, a century ago a practitioner was required to have ordinary skill. In 1853 it was required that the practitioner have such skill as have the thoroughly educated members of his profession. Later, a further distinction was drawn, in 1872 by an Iowa Court, where a verdict against a practitioner was set aside and a new trial ordered. In this case the Court again was with the practitioner, and it may be when they saw they could not let him out under any rule that existed they concluded to vary the rule a little, as he appeared to be a good fellow; and followed the maxim that "the learned professions will stand together."

The Court said, the charge below, "that the law required of the operator such reasonable skill and diligence as are ordinarily exercised in the profession by *thoroughly educated* surgeons, does not give the true legal standard as to the skill and diligence required. The error consists in requiring the measure of skill and diligence ordinarily exercised by *thoroughly educated* surgeons; whereas the true measure is that ordinarily exercised in the profession by the members thereof as a body. That is, the average of the reasonable skill and diligence ordinarily exercised by the profession as a whole; not that exercised by the *thoroughly* educated, nor yet that exercised by the moderately educated, but the

average of the thorough, the well and the moderate, . . . all in education, skill, diligence, etc."

Now, the Chief Justice of Iowa gave a dissenting opinion in this case; and it is a fact to be remembered, that some of the greatest principles ever established in the whole science of jurisprudence have had their start in dissenting opinions. Great constitutional questions have been brought before the people by dissenting opinions; and the bar has been made acquainted with new principles and ideas by the dissenting opinion. This is a dissenting opinion, and I think it is a good one.

The Chief Justice said: "In my judgment the rule there given to determine the skill and diligence to be exercised by physicians and surgeons in the practice of their respective professions is incorrect. It is in effect the average of the ordinary skill of the whole profession, including all grades of learning and proficiency possessed by those who may be considered as belonging to it. Stated more explicitly it is this: The skill of all classes in the profession, the indifferent, the good and the excellent are to be considered, and the average thereof is the skill the law requires. In my opinion the rule cannot be supported, and I do not think it is recognized by authorities. I will briefly point out objections to it which to my mind are insuperable. In the first place, the standard fixed by the rule is entirely irregular and can have no actual existence. No physician ever possessed the skill demanded by it. He is either above or below the standard, an average mean between the thoroughly educated and the well educated and the moderately educated physicians, the classes into which the profession is divided by this opinion would be neither one class nor the other, but would constitute another class, or rather a standard for another class. In this newly created class would be found no member of the medical profession. Yet this ideal standard, which in fact is the measure of no man, is applied to all. The rule, therefore, "cannot be practically applied."

In 1882, a Massachusetts court laid down the rule of ordinary skill as I read it in the beginning, and that, I believe, is the rule that stands today.

**Dental State
Laws Protect
Dentists.**

Now having referred to the changes in the rule of law relating to the implied contract of the practitioner in relation to skill, and having suggested a growth in the law, let me refer to the statute of 1890, which is, I believe, the statute of today.

In the first place, I think it a good statute. It is good because it has fixed the status of the practitioner. It provides that after an examination the successful applicant shall receive a certificate signed by the Governor of the State, which certificate shall set forth that the

person therein named is lawfully authorized and licensed to practice dentistry in this State. In my opinion this certificate has a value. It raises a presumption that the person therein named has all the qualifications required by the rule of law relating to the implied contract. This, of course, is a presumption which may be overthrown, but the burden of raising the presumption no longer exists upon the practitioner. This is of distinct value.

The statute places the disability of which I have spoken upon the dentist, in providing that "no student shall perform any operation upon the mouth or jaw of any person, save in the presence and under the supervision of his preceptor."

And I give this section strict construction, that is, in my opinion, the statute requires the actual presence of the preceptor and his personal supervision of his students' operations.

A statute is like a principle of law in this respect; both have possibilities of growth.

I have traced the growth of one principle of law; let me if I am not too bold suggest a possible growth in the statute. The statute, under conditions when complied with, vests in an applicant the right to practice dentistry. The statute does not provide or suggest that such vested right may be forfeited. Cases may arise when with great propriety the license granted to practice dentistry should be revoked, and yet the statute has not provided for its revocation. That power should be placed some where.*

Now let me state a maxim which has to do with the growth of statutes; it is this: "Any lawyer can draft a wise statute, but only a wise lawyer can draw a good statute that will pass the New Jersey Legislature." If a statute were to enact that:

"When under the provisions of any statute of this State a certificate shall issue to any person to practice medicine, surgery, dentistry or law in this State and such person shall afterward be convicted of crime, such person shall at once forfeit his said certificate and all rights under it as an incident of such conviction."

Such a statute would seem on its face to be reasonable.

When trust and confidence in the person includes confidence in intent as well as in learning and ability, when confidence is lost why should not some power be vested somewhere to at least diminish the convict's opportunity to work endless mischief? Afterward revocation might be extended to conviction for misdemeanors, and later to charla-

* Several States have provided for revocation of licenses.—EDITOR.

tanry and unprofessional conduct. Such a statute would, of necessity, be of slow growth.

We have considered the possession of ordinary care and ability. Now one word as to the *use* of ordinary care and ability. If the practitioner should express malice against another and afterward in the course of an operation cause that person an injury, upon proof of the prior expression of malice a presumption of malicious intent will arise. In my researches I have found no such reported case. The instance of want of ordinary care and ability that will readily occur to every mind in the case when a practitioner, recovering from the effect of intoxication, narcotics or while under their influence, in an attempt to perform delicate work should cause an injury to his patient. Of course this would not happen in this State, where *spiritus frumenti* is always *optimus*. But to the credit of the profession let me say that I find no such case reported in any State.

**Warranty not
Implied by Law.**

Gentlemen, I see that I am near the end of the time which I have allotted myself, and I will stop after reading you an extract from an opinion delivered in the Court of Errors in this State in 1887, and which relates to the maxim that the law never implies a warranty. The evidence showed that the doctor treated his patient for syphilis, and when the patient discovered this he discharged his doctor and said he had not syphilis, and then got mad and would not pay the bill. The doctor sued and recovered a judgment for about eight hundred dollars, the amount of his bill with interest and costs. On appeal, eleven judges, including the Chancellor, Depue, Dixon, Knapp, Reed, Scudder and Van Syckle, affirmed the charge of Chief Justice Beasley delivered at Circuit and assigned as error. In the course of the opinion the Court said: "It plainly appears that the right of a physician to be compensated for his services and medicine does not depend upon the measure of his success in effecting a cure by the means employed, but upon the diligent exercise under his employment of the skill which commonly pertains to his profession, such services must not be regarded as other than beneficial. They are beneficial in a legal sense, and the right to adequate compensation arises upon their rendition wherever his fees are otherwise recoverable by suit at law."

**Dental
Jurisprudence.**

Now I have promised to stop at this point, but must first mention some things omitted. What has been said relates to the incursion of the practitioner into the field of law and is called the jurisprudence of dentistry. Sometimes the law calls on the practitioner to assist in the administration of justice; that part of our subject is termed dental

jurisprudence. The services of the profession in the Webster-Parkman trial is a leading case; there are many others on the books.

The relation of dental surgeons to the system of
Patents. patents is an interesting subject, and is one upon which I should hesitate to speak to this Association whose early decided and high professional attitude taken on the subject so accords with the best thought of the age and is so far in advance of legislation and of judicial decisions that it would be idle for me to speak at length upon the matter.

I understand the principle to be that no device permanently attached to the tooth to assist the mastication of food should be made by law the subject of monopoly by the protection of letters patent issued by the United States. To such principle I heartily subscribe.

Now, gentlemen I thank you for your attention, for your invitation, and for your dinner. I have enjoyed your dinner, and it is due to good dentistry that I have enjoyed it.

President's Address.

By J. J. GROUT, D.D.S., Rock Rapids, Iowa.

Read before the Northern Iowa Dental Society at Mason City, September, 1897.

Today we begin the third year of our existence as a Dental Society. We are young in years, weak in point of members, but strong in the love of our chosen profession and old in our determination to advance and improve ourselves in every way possible. For that purpose are we here today. In the interchange of thought, in the mingling together in a social way, giving inspiration and courage to others, receiving from others in a like manner and proportion, taking goodness to ourselves while trying to impart goodness to others; thus are we joined together in this, our little society of Northern Iowa.

In society work as in war and other fields of action, efficiency does not always depend upon members alone, but upon organization, discipline and unity of action. I hope as we grow in years and numbers, we may grow in knowledge and usefulness. There are many things both new and old that are claiming the attention of the dental profession at the present time. Not all of equal importance, but each worthy of our careful consideration. We are in some respects, "of many minds." What

to some is of much importance, to others may be of lesser import. Thus, in gathering together and in the interchange of thought as we do at our meetings, each of us absorbs something that will be of great interest and help to him in his every-day practice.

The social feature of our gatherings is to me of great benefit; a getting-away from business, leaving behind all the little annoyances attendant upon it, grasping in fellowship the hands of my brother dentists, touching elbows with them in a social way, always rests me both mentally and physically. I go home better prepared to take up life's cares and perplexities.

In looking over the professional field I notice more improvement in dentistry than in any of the other professions. Not only in instruments and materials, but in the knowledge of their application. The alleviation of pain by cataphoresis, the different forms of crown and bridge work, better laws regulating the practice of dentistry, more States enacting laws for their protection against quackery in this line, new medicaments discovered for the treatment of dental lesions, and a better knowledge of their application and effects, until at this day and age serious indeed must be the condition of a tooth that will not succumb to the treatment administered by an intelligent operator, and become a lasting and useful member.

Attending society meetings, both State and District, I consider one of the very best means of acquiring this much desired information. Our lives are made up in a large measure of habits acquired. We get in the habit of staying at home and we like it. We get in the habit of attending society meetings and we love it, and are always on hand. Show me a man that never attends societies and I will show you a man who is narrow in many ways, runs in ruts or grooves and cannot get out; but show me a man who reads much and witnesses more, avails himself of every opportunity to attend society meetings, and I will show you a man who is broad-minded, reaching out and grasping everything that is good, that will aid him in his business, and that will make of him a better husband, father or lover, a better and more capable man in all the walks of life.

The laws governing the practice of dentistry which are now in force in the various States, some good, others not so good, I hope some day to see amended so that we shall have one universal law applicable, so that a dentist holding a diploma from a college recognized by the National Association will be qualified to practice in every State of our Union. If we are qualified to practice in Iowa, we certainly are in Minnesota or any other State. Let the examinations at our colleges be such that no person not qualified to practice anywhere, be allowed a

diploma. I do not say how this is to be done, but I believe it can and should. We need a law to protect those who have spent time and money to qualify themselves for the duties of the profession against quackery and fraud. Here in Iowa we have a so-called dental law; still quackery and fraud are rampant, and the State Board claims the law is such they cannot prevent it. Let us erase it from the statutes or amend it so that honesty and ability will be protected. We have much to be proud of as well as to complain of.

During this great financial depression, while we suffer with our neighbors, still we are much more favored than many. We have all of the necessities and some of the luxuries of life. Let us be thankful we are in Iowa, one of the first among her sister States, where a total failure of crops was never known, and where, if, in the providence of God, times ever do change for the better, we will be among the first to note the change and profit by it. It is only by hearty co-operation we can accomplish the most good and to the greatest number, so let us each do our duty as we see it and much good will result from our meetings from year to year.

Use of Creosote and Iodine in the Treatment of Alveolar Abscess.

By P. H. JONES, D.D.S., Clear Lake, Iowa.

Read before the Northern Iowa Dental Society at Mason City, September, 1897.

Notwithstanding the attention which the alveolar abscess has received at the hands of the dental profession, a large number of dentists find themselves without a remedy with which they can so effectually treat this class of lesions as to enable them to complete the entire operation at one sitting.

Some remedies have been prepared and placed upon the market which it is claimed will effect a cure with one treatment; but for some reason we do not find them in the medicine cabinets of the profession at large. Most of us are content to treat these cases with H_2O_2 or pyrozone in conjunction with some of the antiseptic dressings, and give the abscess time to heal before completing the operation. This, perhaps, is as satisfactory a method as any, when time will permit; but, as dentists, we are often called upon to extract a tooth which might be restored to its former usefulness if properly treated, or turn the case over to some

other dentist on account of the patient's not being able to have it properly cared for at that time.

It is with this thought in mind, and the hope we may help some one to deal more successfully with this class of lesions that this paper is prepared.

**Method
of Preparation.**

Creosote and iodine is a remedy old to the profession. It originated with Dr. Atkinson, of New York, and was called by him "Black Devil." It is prepared by dissolving crystals of iodine in creosote until you have a saturated solution. It is of a black color and a syrupy consistence, and is a vesicant. It is an unpleasant remedy to use, having a pungent, penetrating odor, which, were it not for the highly satisfactory results attending its exhibition, would condemn it.

We believe that we can safely say that a large majority of chronic alveolar abscesses may be cured with one treatment, and the entire operation of filling be completed at one sitting without any fear of unpleasant after-effects, if the abscess is so located that it can be completely flushed with the remedy. Of course, cases where there is a fistulous opening, or an artificial opening can be made into the abscess, are the ones most favorable to this treatment.

**Method of
Using Creosote and
Iodine.**

In using the remedy, protect the adjacent tissues well with absorbent cotton or napkins. After an opening through the apical foramen and through the sinus has been effected, wash out with H_2O_2 or three per cent. solution of pyrozone. Wipe out canals and with a few shreds of cotton wound loosely on a broach, carry the remedy as far up into the canal as possible. Place unvulcanized rubber in the canal, and with a wooden piston force the remedy out through the sinus, placing napkin over the opening. If preferred, a hypodermic syringe may be used, being careful to have such a packing about the needle as to prevent regurgitation of the medicament into the mouth. As soon as the remedy appears at the opening, fill the roots, forcing the *chloro percha* through sinus and out at opening, which will insure perfect root filling. The rest of the operation can then be completed in the usual manner.

Never use creosote and iodine where tannin has been used, or tannin where creosote and iodine have been used, as an inky black color is produced which cannot be removed. One practitioner says that this solution may be injected into any tooth and all traces of the color be removed by ammonia. While we have injected it into superior central incisors of a dark color, and by means of ammonia left the tooth as good color as before the operation, we must confess that we should hesitate about injecting it into the lighter and more delicately shaded teeth.

In conclusion let me cite a couple of cases treated by this method.

**Cases from
Practice.**

Case 1.—Patient a middle-aged lady. Superior right central badly decayed. Alveolar abscess with fistulous opening of at least three years' standing. Tooth treated as described above and crowned at one sitting. Short time after abscess healed, and no trouble has been experienced since. This was two years ago.

Case 2.—Boy about fifteen years of age. Both superior central incisors broken away nearly to gum line. Abscess at apex of each root. The right had a fistulous opening. The other never had opened, but had given no particular trouble. On opening into the canals, pus flowed freely from each. After a week's treatment with pyrozone and cassia, no improvement could be discerned. At this stage an opening was made into the blind abscess through the alveolus, when we had no trouble in forcing pyrozone through the root and out at the opening. After another week's treatment, the root was filled successfully. During this time the other root continued to get worse; instead of one opening at the apex of root, there were now two more. One near the gum line, and the other about midway between that and the one at the apex. As a last resort, creosote and iodine were tried. When the treatment was made, pus tinged with blood flowed from the root upon removal of dressing. The tract was then flushed with pyrozone, and by means of a syringe, creosote and iodine were then injected in it. It ran out of the several openings. The root was filled, as described above. A week later the root was crowned. This was about eight months ago. The patient is occasionally seen, and has experienced no discomfort from the tooth.





Second District Dental Society.

Discussion of Dr. Snyder's Paper.

Dr. Warner.

The point of particular interest to the gentlemen present is the relation of eye strain to dental work and vice versa.

There are many cases of headache, pain about and in the eyes from which people suffer, that in spite of correction by glasses, in spite of treatment of a general nature, still continue, and very frequently the cause of it is found to be in the condition of their teeth.

I have occasion to ask patients who suffer from pain about the eyes and who have not been relieved, as to the condition of their teeth, and in many cases we find there is necessity for a visit to the dentist to complete the work of the oculist.

Again, the subject appeals to you from the fact that you use your eyes constantly, often in near range, for you must be students as well as mechanics, and the work at books and at the chair is done at very close range; oftentimes the eyes being inadequate to the task, grow weary and headaches result.

I find that a great many dentists need to wear glasses, as a source of relief for their eyes.

The subject of eye strain is becoming more and more prominent. A few years ago, little attention was paid to it. Now, with physicians of all classes, as well as with all classes of people, it has become a well known fact that headaches, very many of them, are due to eye strain, and I am happy to say that in public schools examinations of the eyes of children are made to determine defects of vision, and if such defects are found, they are advised to go to an oculist.

The essayist mentioned the question of a lack of balance of the ocular muscles, which is certainly a very important factor in the causation of eye strain, and the relief sometimes given by glasses, in these

cases. There is a very large field for work by the oculist in that direction. In many cases, after the refraction has been perfectly corrected with glasses, the patient will suffer from headaches due to muscular inefficiency. I very much prefer to correct such defects myself with treatment by prisms developing the strength of the weaker muscles rather than by making tenotomies. I think that the prescribing of prisms in very many cases of the muscular degrees of insufficiency, gives much benefit to the sufferer, and certainly a great deal can be accomplished with prisms in the way of developing weak muscles.

We are all part of a complicated whole. You
Dr. Matheson. notice how frequently one organ is influenced by disease of adjacent organs,—how frequently the first indication of any trouble is shown on examination of the eye, and how frequently on looking into an eye you see indications of a brain tumor. You know how diabetes or diseases of any kind, may influence the functions of the eye, either permanently or temporarily, and it is only natural, as other organs have an influence upon this, that this has an influence upon other parts of the system. I am not one of those, however, who ascribe all diseases to the eye—still there is a great deal in so important an organ, which might be useful to you gentlemen, who make such close use of your eyes, often under very trying circumstances. When you have to stoop and bend in such a way that the eyes do not easily swing together, it is hard to maintain an even balance of the eyes with ease or comfort in those strained positions. I have found that that was a cause of some of the troubles that you sometimes have in the eyes.

I quite agree with what was said as to the value of prisms, both as assisting muscles, and, as Dr. Warner said, in strengthening them. It is somewhat in the nature of a dumbbell exercise, as by the use of prisms you can often give weakened eye muscles assistance.

Not long ago I was looking over some beautiful colored designs, made from colored paper by folding the paper. This work was done by children in kindergartens. I have seen it stated that it is very bad for young eyes, as they are not perfectly developed, to do this fine close work. I should think it very wrong to start children out in that way, and I would like to hear if it is harmful.

I agree with the gentleman that it is highly improper work for children, also some of the other work—such as pricking cards—which they do in kindergartens. I have always taken that stand in talking with teachers and parents. I most strongly object to that sort of work, as it often lays the foundation of near-sightedness. The tissues are more yielding in the

eyes of young children, and the foundation of near-sightedness is laid at a very early age. Sometimes this is congenital, but it is developed by too much near work, and the earlier it is begun, the more likely is near-sightedness to result. Of course it is often not noticed until children reach their teens. Children did not begin ordinary school work so young, until this kindergarten system was introduced. It is a good system in many ways; I only object to this class of near work, when they are only little tots.

I would like to ask Dr. Snyder for some information as to the method known as tenotomy—cutting the muscles to correct irregularity of the eyes. I ask it because one or two members of our profession have gone through this operation, and one whom I know has been practically ruined by it, and is in such a state now that he can hardly follow his profession. I think that is something against which the dental profession should be warned, and I think it would be a good thing to have Dr. Snyder tell us something about this.

I do not know whether I ought to criticise that method or not. Of course, I have no hesitancy in saying that I entirely disapprove of everything in that line. My own impression is that the muscle is not tenotomized at all, and even if it is, I feel quite sure that it generally does more harm than good. I could cite instances of cases which I have seen, wherein tenotomy was suggested, wherein there was no trouble with the eye whatever except that the patient complained of slight dizziness quite frequently.

I think in my own mind that the only thing that can be obtained from tenotomizing is to increase the physician's bank account. That is my honest impression. I think it is a farce, and more than that, that any man who indulges in it, is indulging in absolute quackery. In all the cases of this kind which I have seen, no benefit has been derived from it, excepting the moral effect on very nervous people, and you can obtain just as good a result by treatment in other directions as you can by making the patient believe that you are performing an operation by cutting a little of the muscle, until you have a balance with the other muscles, which is claimed or supposed to be either manifest or latent—manifest, where it is evident without any difficulty on the part of the oculist and on the part of the patient, and latent where it takes special treatment under certain conditions to bring out a little difference of want of balance. I know of two cases where the patients complained of headaches and consulted a physician who used this method, but the patients not caring to undergo this operation consulted other oculists, and after treatment for a short time, the headaches passed away.

I feel quite certain, however, that very few graduated tenotomies are done. Of course there is a pretense at it, quite frequently, but very few of the operations, if there are any operations done in graduated tenotomies, have an effective result.

Dr. Hyatt. Is there any correction by which the patient can be made to distinguish different shades of color—any method of correcting color blindness?

Dr. Snyder. To distinguish different shades of colors is a matter of education. If there is failure to detect primary colors, it is generally congenital and cannot be corrected.

Dr. Hyatt. Color education, then, must be a question of great interest to us, and I wish the Doctor would give us more information as to how this education, in detecting colors, could be acquired.

Dr. Snyder. Well, I think one would have to avail oneself of the opportunities for seeing all shades of colors. Some people get more opportunity for this than others. I never tried to educate myself in colors and yet I distinguish any color without difficulty. I may not be able to name every color, which is secondary to the primary colors, but I can classify them into primary colors.

Dr. Hyatt. I thought if we could adopt some method of education in our colleges, we might not see so many glaring differences of colors in artificial teeth.

Dr. Hill. I consider that we are very fortunate in having these gentlemen present to instruct us on this subject, because there is no dentist in the room, I presume, who has not had occasion to send patients to, well, I will say Dr. Matheson, as it has been my custom to do that. They come to us with pains in the head, and with pains in the face, and we investigate as closely as we can, and we find nothing. The next point (and in my experience I always do it), is to send them to an oculist. I remember one patient whom I sent to Dr. Matheson. While in Europe she had something the matter with her eyes, and the oculist there, I think it was in Paris, upon learning that she lived in Brooklyn, told her, "If you live in Brooklyn, there is not a better man in the world to go to than Dr. Matheson." And it is a pleasure, indeed, to have a gentleman with such a reputation with us. The connection between the subject of the evening and our work is very close.

I had a case of headache and pain in the eye, and I could find nothing the matter with the teeth. I finally went at it in a negative way.

I said, "I can find nothing, but I really think the trouble is in that lower wisdom tooth, and I would have it extracted." I had no reason for telling the patient that, but that tooth was extracted and the patient has not had a particle of trouble since. That was more luck than science. I think the oculists present will understand a little of that, because I think without a doubt they have had cases of that kind.

I have known Dr. Matheson a long time and I play with him a little sometimes. I had a patient two years ago who was suffering, as she supposed, from her eyes, and I sent her to Dr. Matheson. He said there was nothing the matter, but at the same time, she had better wear glasses and he prescribed and she got the glasses. I had a letter from her afterwards, and she said, "My headaches are better than they used to be. I wear those glasses occasionally, but my headaches are better."

But to be in earnest we are very closely connected in that line, and I am suffering myself in that direction, and if Dr. Matheson were not so busy and it did not take so much time to get to him and get away after you get there, I should have been to see him during the last three months.

I have been very much interested in the paper and in the discussion, and I think we can compliment ourselves on having these gentlemen to enlighten us on this subject.

There is a point that seems to me to have an important bearing on the relation between the eye and our work, and that is the necessity for facing our work directly. We often find it difficult to do so, and my experience has been that where it is necessary to look out of the corner of the eye, if it is possible, it is better to use the mouth mirror, for the strain on the eyes is thus removed.

Dr. Hutchinson.

We often strain our eyes unconsciously in doing our work. I find that I sometimes use only one eye. I get into such a position that only one eye sees the tooth on which I am working. I have proven that by closing one eye and then the other, and find that I use one more than the other, and that eye must get strained unnecessarily. If we could get a position more nearly in front of our work, it would probably save a good deal of eye strain.

Dr. Wooley.

How should we regulate our light, so as to rest the eyes in the process of a long operation? If we have a southern exposure, we have a varying light in the early hours. If we get to work at 8 o'clock and work for two hours, there is a varying light, and most of us have very poor facilities for regulating that change. I would like very much to hear Dr. Snyder's opinion on that.

Dr. Ferris.

The Doctor's question is a very difficult one to answer; it seems to me it would be necessary to be present in each room where the patients are being operated on. Of course it is always well to have your light regulated so that you will get the best light you can on the object on which you are going to work. It should not be directly glaring in your eyes, and you should not be in a position where you might cast shadows on your work. It is always well to have your work on the same plane as the horizontal plane of the eyes, because if one has to do as you do—metaphorically speaking, stand on your head, with most of your work—there is no question but that the position is very trying, and the chances are that it will strain your eyes.

If you go to a picture gallery, you will find most of the pictures above the horizontal plane of the eyes, and, consequently, your eyes will tire quickly, because the muscles which are used in rotating the eyes upward are not used as frequently as the muscles rotating the eyes in the horizontal plane. So that in your work the best position to assume is that which would bring your work more nearly in the same plane as the eyes would ordinarily work, and rather looking down than up. Further than that it would be rather difficult to answer the question, unless I could be with the doctor who is operating, and then probably I could not answer it very accurately. You cannot always get your light just as you want it, you have to take offices as you find them. A northern light is usually the best.

As Dr. Van Woert has been making investigations of X-rays in connection with dental operations, I would like to ask him if he will tell us what progress he has made in that direction.

I will say that I believe the time has arrived when the X-rays can be put to practical use in dental surgery. I believe it is only a question of a year or two when every dentist practicing in the United States will avail himself of the advantages of this wonderful discovery. I further believe that the so-called dangers from the effects of the rays are entirely erroneous. I do not see the necessity for the apprehension that some of the members of our profession seem to have. One gentleman in particular spoke to me about a case that he had in which he would like to use the X-rays, but was afraid to, for fear of a burn. Such a thing as a burn has never been known. That we have sores is beyond question, but those sores are, I think, nothing more or less than septic sores, such as are described by Dr. Bleyer, of New York, and are due to the fact that the patients are not clean. Most of the cases of sores that succeed an

operation of that kind will be found to have taken place in a very low order of life, where the patient was far from cleanly. This being the case, the patient should be prepared for the operation as you would prepare a patient for the knife. I do not think that that is at all illogical. In most of the cases that we have, the time of exposure has been cut down so short, that it is now a question of the condition of the patient.

The last picture I made was for Dr. Ferris. I forget the time of exposure—perhaps five minutes—with a fairly good tube. A superior lateral was taken without a screen, five minutes exposure, and gave us the location of the tooth perfectly.

Since that time I have made changes in my static machine and increased the speed by 500 revolutions, and I get better results with ordinary cellulose in three minutes than I gave Dr. Ferris in five.

The question of apparatus is quite a serious one with the dental practitioner. Another thing I may say is that such a thing as a septic sore from the effects of the rays has never been known from the static machine. All those that have occurred, have been produced with coils. The amount of current produced by a static machine is so minute that there is very little danger that it will have this effect.

The machine that I am using has a capacity of a little over 2,000 volts, and yet there is not current enough to affect the movement of the milliamperemeter. A coil giving 2,000 volts would probably tie that meter up in a knot.

Another thing is that there is great difficulty in holding a negative in a permanent position. I devised several little plateholders for this purpose, wrapped them in paper and covered them with a rubber dam, but in many cases they would move before I get through making the exposure, and resulted in a defective negative.

About a week ago I met Dr. Jarvie and Dr. Kells to show the X-rays and machine. When I got home I thought I had wasted much energy trying to get good plateholders, when I could get the very best by taking an impression of my boy's mouth and using the curved surfaces where I wanted to place the negative; I wrapped it in paper, shoved it back in his mouth and had him bite on it, and I had the best plateholder I ever saw; in three minutes I got a perfect negative of the teeth, roots and pulp canals.

But that can be carried a great deal further, by using suitable cups and having the modeling compound so arranged as to get the impression of both the upper and lower teeth, making the exposures for the two at one sitting.

Another thing I learned some little time ago was to make a half dozen negatives at once. The cellulose being translucent to the rays,

place them one on top of the other and you will find the last just as good as the first.

I believe the X-rays perfectly practical for the discovery of non-erupted teeth—for locating wisdom teeth, which give us so much trouble—for discovering the cause when teeth fail to respond to treatment, and for locating fragments of roots, and, as I said before, the time of exposure is reduced to a minimum, so I do not think any one need have any hesitancy in subjecting patients to it, provided you have the proper instrument for producing the rays. I do not think the three minute exposure would make any difference.

The case that Dr. Shields had in New York—the only disastrous one I know of—was a girl who lived in a tenement house, top floor back, and the exposure was nearly one hour. In her case her hair came off, and she had a very nasty sore face. But as I say, the time was nearly an hour, and with a twelve-inch coil. Any one knows that to run a coil requires considerable skill, and there must necessarily be more or less danger; while on the other hand, a static machine of twelve-inch spark would not be dangerous at all.

Central Dental Association of Northern New Jersey.

The Central Dental Association of Northern New Jersey held a regular meeting in Newark, November 15, 1897, at which Mr. Alexander Grant, an attorney at law, read a paper entitled, "The Jurisprudence of Dentistry," a report of which appears in this issue. The following discussion ensued.

Discussion.

I have here the models of two cases that came
Dr. Weld. under my observation about three years ago, and which concern jurisprudence to some extent. In the first place I want to call your attention to the similarity of the two cases. The right central is gone in each case, and both cases required bridge work. Similar upper teeth had disappeared from the left side of the jaw in each case. The history of the two cases is as follows: Both came to me within a period of three months. In the first, the bridge on one side became loosened after the gentleman went away, and he never

came back. This was three years ago last March. He has been in the courts for three years, and the case was settled last week out of court. The other was a similar case, and, strange to relate, the bridge on the right side also loosened slightly, but he returned. It was readjusted properly and he is wearing it today. He paid his bill without a murmur.

Now a question that arises in connection with jurisprudence and the skill that the dentist is supposed to employ is, how far the dentist must have the co-operation of his patient in accomplishing a certain piece of work. We know that the very highest physicians and the very highest surgeons in every hospital have the co-operation, not only of the patient, but of the nurse as well, and of the physicians in consultation. It seems to me that this is a point that is very important, and I brought these cases here for your examination with the view of bringing out that point.

Dr. Stockton. Was the suit for damages, or what was the trouble?

Dr. Weld. No, there was no suit for damages. I sued for payment for the work. He refused to pay the bill because the bridge loosened; he claimed that the work had not been done properly.

Dr. Osmun. The essayist says it is laid down as a maxim that the dental practitioner must exercise due care, skill and diligence in his professional work. It is a difficult thing to establish what is a reasonable amount of skill. He has given us some valuable points, and it is clear that if we were to be called into court tomorrow in a suit to collect a bill for services, and the defendant should say that we had not exercised a reasonable degree of skill and care and judgment in the case, that we would have to call quite a number of witnesses to establish that fact, notwithstanding that the statute gives us a standing already in court.

There is one point that Mr. Grant did not bring out, and which I think is quite important. Dr. Weld brought it up, to a certain extent, when he presented his models here. That is, how far does contributory negligence on the part of the patient apply, and how far will that contributory negligence influence the decision of the court. Suppose that we make a set of teeth for a patient, a full upper or lower denture, and the patient has had no experience in wearing artificial teeth; they are not very comfortable in the mouth at first, and the patient says they are no earthly good, and refuses to pay. Now, if that patient does not pay the bill, and does not return to find out what the trouble is, but waits a year, or two or three years, and then you go into court to prove your bill, the case has not only become more complicated, but has not the patient been guilty

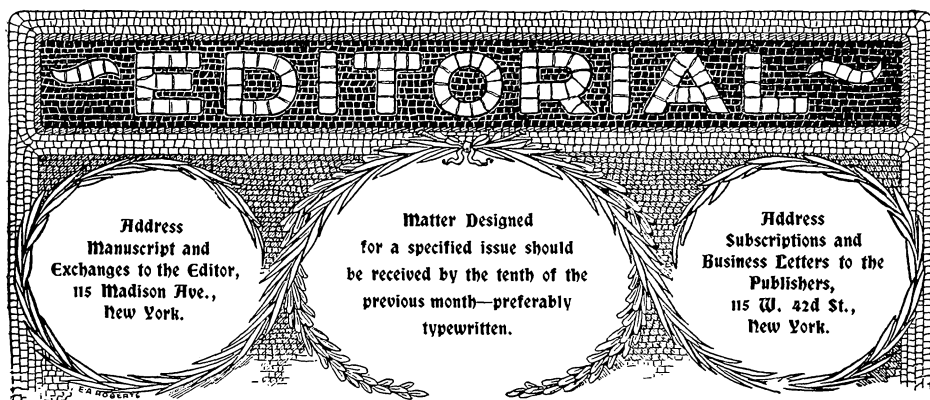
of contributory negligence in not coming back to the dentist at the proper time to complain that the work was unsatisfactory.

Mr. Grant. The law will imply that; contributory negligence may be properly set up; there is no doubt about that.

Dr. Osmun. For instance, a gentleman came to me recently and said: "I am going to bring suit against a certain dentist; four or five years ago he attempted to extract a lower wisdom tooth for me and broke it off, and I have suffered the agonies of the damned ever since." I said: "Did you go back to him?" He replied: "No, I would not go back to such a man as that, he don't understand his business; my throat has been sore ever since. I went over to a specialist in New York and he says the whole trouble in my throat comes from the improper extraction of that tooth." I said: "Four years is a long while after to bring up such a case as that; how are you going to prove that that man was guilty of any malpractice or negligence, if you did not go back to him in all this time? The professional man who told you that your dentist was culpable is worse than a blackmailer, because no man can tell the result of an operation on living tissue, four years after it was performed. Who knows what has taken place in the meantime? Who knows what other diseases have set in, that had nothing to do with the operation? It is beyond the power of the human mind to tell such a thing as that."

Dr. Jarvie. I was especially interested in one point that the gentleman brought up, in regard to an omission in your law, which does not provide for the punishment of a man who has proven himself unworthy, by depriving him of the right to practice. We have had no trouble in getting a section of that kind inserted in our New York law. In New York State when a man has committed a felony or any high crime, which appears by *prima facie* evidence, his license to practice would be at once revoked by the Regents. If a person has been leading a life such as would bring disrepute upon the profession of dentistry, charges, under oath, may be made to the Board of Dental Examiners, and if, after trying the case, they find that the charges are proven, the Board of Examiners may recommend to the Board of Regents that the license be revoked, and it can then be revoked.





Our Appeal in Congress.

The following is a copy of the bill introduced in behalf of the dental profession by Senator T. C. Platt, of New York:

55th Congress.
2d Session.

S. 4083.

In the Senate of the United States.

March 10, 1898.

Mr. Platt, of New York (by request), introduced the following bill; which was read twice and referred to the Committee on Patents.

A Bill

Amending the statutes relating to patents, relieving medical and dental practitioners from unjust burdens imposed by patentees holding patents covering methods and devices for treating human diseases, ailments and disabilities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Section forty-eight hundred and eighty-six of the Revised Statutes be, and the same hereby is, amended by adding thereto the following paragraph:

“But no patent shall be granted upon any art of treating human disease, or ailment, or disability, or upon any device adapted to be used

in the treatment of human disease or disability, or attached to the human body and used as a substitute for any lost part thereof, or upon any art of making such device, unless such device is adapted to be put on the market and sold substantially complete and ready for use or attachment," so that such section shall read as follows:

"Sec. 4886. Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law and other due proceeding had, obtain a patent therefor.

"But no patent shall be granted upon any art of treating human disease, or ailment, or disability, or upon any device adapted to be used in the treatment of human disease or disability, or attached to the human body and used as a substitute for any lost part thereof, or upon any art of making such device, unless such device is adapted to be put on the market and sold substantially complete and ready for use or attachment."

Sec. 2. That Section forty-nine hundred and twenty-one of the Revised Statutes be, and the same hereby is, amended by adding thereto the following paragraph:

"Nor shall any suit or action be maintained for the infringement of any patent for an art of treating human disease, or ailment, or disability, or for any patent for any device adapted to be used in the treatment of human disability, ailment, or disease, or attached to the human body and used as a substitute for a lost part thereof, or an art of making such device, unless it appears that such device can be made and put on the market substantially complete and ready for use or attachment," so that said section shall read as follows:

"Sec. 4921. That the several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may

deem reasonable; and upon a decree being rendered in any such case for an infringement the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby; and the court shall assess the same or cause the same to be assessed under its direction. And the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case.

"But in any suit or action brought for the infringement of any patent there shall be no recovery of profits or damages for any infringement committed more than six years before the filing of the bill of complaints or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.

"Nor shall any suit or action be maintained for the infringement of any patent for an art of treating human disease, or ailment, or disability, or for any patent for any device adapted to be used in the treatment of human disability, ailment or disease, or attached to the human body and used as a substitute for a lost part thereof, or an art of making such device, unless it appears that such device can be made and put on the market substantially complete and ready for use or attachment."

Sec. 3. That this act shall take effect immediately upon its passage, but the paragraph added to Section forty-eight hundred and eighty-six shall not be held to apply to any application for patent filed prior to the passage hereof nor to patents granted upon applications filed prior to said date; nor shall the amendment to Section forty-nine hundred and twenty-one affect the rights of action that may have accrued prior to the passage hereof.

This bill is now in the hands of the Senate Committee on Patents, who have agreed to give us a hearing promptly. A duplicate of the bill will have been introduced in the House by the time when this reaches our readers, by our Congressman, Lemuel E. Quigg, of New York City.

Our readers are requested to write—WITHOUT A DAY'S DELAY—to the members of the two committees, urging the passage of the bill, as this will influence them greatly. The following are the committeemen:

Senate Patent Committee.

Orville H. Platt, of Connecticut.
Jeter C. Pritchard, of North Carolina.
George P. Wetmore, of Rhode Island.
John M. Thurston, of Nebraska.
Roger Q. Mills, of Texas.
Stephen R. Mallory, of Florida.
Thomas B. Turley, of Tennessee.

House Patent Committee.

Josiah D. Hicks, of Pennsylvania.
Edward Sauerhering, of Wisconsin.
Winfield S. Kerr, of Ohio.
John M. Mitchell, of New York.
Walter Reeves, of Illinois.
William C. Lovering, of Massachusetts.
James H. Davidson, of Wisconsin.
William L. Ward, of New York.
William Sulzer, of New York.
Champ Clark, of Missouri.
Thomas Y. Fitzpatrick, of Kentucky.
James R. Campbell, of Illinois.
John N. Stephens, of Texas.

The Value of Museums to Science.

Those who imagine that museums are supported merely for the gratification of those of the community who wander through the halls, glancing superficially about them and admiring the "curiosities," have little comprehended the true significance of such institutions. Let us for a moment inquire into the sources from which museums are evolved, by which means we will better interpret their meaning and intent. No better method of conducting this analysis offers than to study the facts relative to a great museum which is now almost at its inception.

In the Borough of Brooklyn, the eastern section of New York City, a few years ago there were a number of isolated struggling scientific societies. Perhaps the most imposing, if not the most important, of these was known as the Brooklyn Institute. This association operated under a charter, owned a building, and supported a circulating library free of charge. There were few members and these devoted themselves to learned, but not very popular science.

Professor Franklyn Hooper thought there was a great opportunity and acted upon it. He was made superintendent and began systematically enlarging the sphere of the Institute by persuading the various scientific societies in the city to merge with it, becoming departments of the Institute. At the present time there are some thirty odd departments, all in flourishing condition, and the total membership is more than five thousand. In short, the Brooklyn Institute is now one of the greatest educational influences in this country.

As soon as the scheme of uniting the many smaller societies into the larger body became an assured success, Professor Hooper inaugurated steps toward the founding of a great museum. An appropriation of three hundred thousand dollars was obtained from the State Legislature upon condition that two hundred thousand more could be raised by donation. This was accomplished, and the first wing of the museum building has been constructed.

But a building, however elegant, is not a museum until it becomes the repository of collections. How could these be obtained? Just as the membership of the Institute grew by the union of lesser societies, so will the great collection assume important proportions. And this brings us to the purpose of this deviation from the more dental aspect of the subject.

In each of the smaller societies were men who in connection with their scientific studies had become possessed, from time to time, of material connected with their special work. In some instances, individuals had amassed large private collections, while in others the members of the societies had made donations to their society's collections, which they all owned in common. When the Brooklyn Art Society became the Art Department of the Brooklyn Institute, they brought with them a fine

collection of paintings which will now form the nucleus for the art galleries of the museum. The Geographical Society, when received as the Department of Geography, brought in the most valuable collection of maps and charts in this country. The various natural history societies brought with them not only the society collections, but many members have magnificent private collections which will gravitate toward the museum of the Institute, so that it is certain that the building now completed will be rapidly filled.

Thus, we find that in all branches of science in addition to their literature, the students endeavor to make a permanent impression in the form of a collection of objects which record their progress and achievements and these objects are quite as important and as instructive to students of the future, as is the literature itself. Indeed, the museum is as necessary as is the library.

Medicine long ago took a prominent place as a true science, and we find medical museums throughout the country, and all over Europe. Dentistry has done nothing of this sort, but dentistry, as a profession, is young, and one might venture to say that only recently have its students elevated it to the plane of a science. Yet dentistry, more perhaps than most other sciences, would have benefited vastly by a storehouse of its work, which would have accurately recorded its progress. How shall we demonstrate this?

Let us imagine that even during the last fifty years there had been in existence a Dental Museum. Suppose that whenever a dentist invented an instrument, or devised a method, he had deposited in the Dental Museum a set of models and an adequate description of his idea. What a collection we would have today! What a history of American dentistry! How interesting to the student, and how valuable to the profession, if only as a means of preventing fraudulent claims and of defeating spurious patents! No argument is needed to establish this claim. It is self-evident.

Is it too late to do something of this nature?

Dental Museum in Washington. Not at all. Such a collection made during the next fifty years will have the same relative value as the one which we regret was not made during the last fifty years. More

important still, the building is erected and the opportunity of housing such a collection is offered. During the last year the dentists have unquestionably heard through the magazines and from communications to the various societies that the Army and Navy Museum, in Washington, has established a dental section. All this has aroused but a passing interest, and a recent visit to the museum disclosed the fact that very few donations have resulted. A few men have done well. Dr. Jackson has made a duplicate of his extensive set of regulating models and has deposited them, and Dr. Angle also sent a large and valuable collection of models. Thus in a small way we see that this Dental Museum grows on the lines indicated in connection with the Brooklyn Institute. But as yet the growth is not great enough. A bill is before Congress and will undoubtedly be passed, authorizing the appointment of a dental pathologist to care for the dental section of the museum. But the dentists themselves must build up this section. A great dental collection must grow up from individual donations, and in order that something tangible may result at once we have a proposition to make, which will be explained.

First, however, as an example of how interesting such a collection might be made, attention may be called to the accompanying illustration. Before the introduction of the dental engine, burring tools and drills were made with long handles and were turned with the fingers. From this to the Morrison engine, patented in 1871, February 7, was but a step; at least, such has been the popular notion. That the dental engine was an American invention we have been reasonably sure. Now we learn that there was an intermediate step of progress, and it is of great interest to have proof of this.

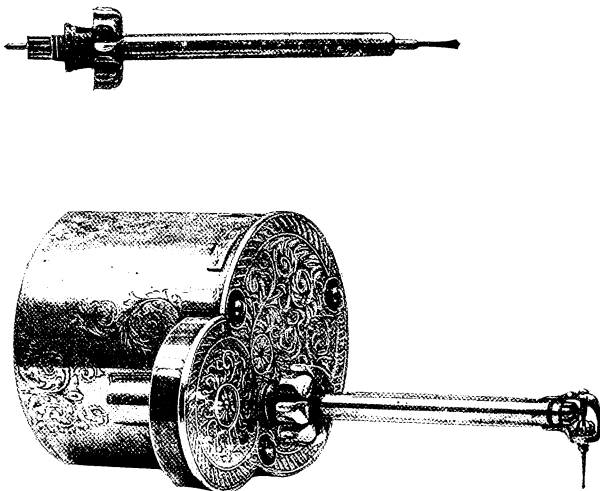
At a meeting of the Second District Society last year Dr. Thaddeus B. Hyatt presented the society with the instrument from which the illustration was made. Of it he says: "My uncle, who is now dead, gave me the engine, as the inventor presented it to him, because he had been the one to make all the drawings. Sorry I cannot give fuller information." The instrument, however, was patented in England October 20, 1864, thus antedating Morrison by several years. While this is not the perfect practical engine machine which even the original cord engine was, it now appears to have been the first device for turning dental drills by power

other than with the fingers. An abstract of the patent may be of interest.

Letters Patent to George Fellows Harrington, of Sedgeley House, Ryde, in the Isle of Wight, Surgeon Dentist, for the Invention of "Improvements in Machinery or Apparatus for Drilling, Cutting, Grinding, and Polishing Teeth whilst in the Mouth."

Sealed the 20th October, 1864, and dated the 22d April, 1864.

Provisional Specification filed by the said George Fellows Harring-



ton at the Office of the Commissioners of Patents, with his petition, on the 22d April, 1864.

I, George Fellows Harrington, of Sedgeley House, Ryde, in the Isle of Wight, Surgeon Dentist, do hereby declare the nature of the said Invention for "Improvements in Machinery or Apparatus for Drilling, Cutting, Grinding, and Polishing Teeth whilst in the Mouth," to be as follows:

This Invention consists in the application and use and of any arrangement of spring clockwork for giving continuous rotatory motion in one direction to drilling, cutting, grinding and polishing tools intended to operate upon teeth whilst in the mouth. The clockwork, which consists of any suitable and well known arrangement of a barrel spring and toothed gearing, arranged according to the speed and power required, is contained within a hollow metal box, case or holder of a convenient size to be held in the hand of the operator. In the arbour or spindle of one of the wheels of the clockwork a square socket or hole is made, into

which the square end of the loose or detachable spindle is temporarily fitted, the greater portion of such spindle being contained within a tube or sheath fixed to the outside of the box or holder case of the clockwork, whilst its outer end, or that which protrudes beyond the sheath carries the required tool (the tools being made removable), so as to be changed to suit the operation to be performed. A small collar bearing is fitted inside the outer end of the tube or sheath to steady the spindle in its revolution. When the spring is wound up, the clockwork immediately commences to revolve, and this imparts a rapid rotatory motion to the tool. In using this apparatus the clockwork case or holder is held in the hand of the operator, and the end of the spindle which carries the tool is introduced into the mouth, and the tool brought in contact with the tooth or teeth to be operated upon. The essential feature of this Invention is the substitution of any suitable arrangement of spring clockwork for an archimedean screw or bow for giving a rotatory motion to the tools intended to operate upon teeth whilst in the mouth. The revolutions of the tool are either arrested or controlled by pressing the thumb or finger against a brake wheel which is fitted on to the arbour or spindle of one of the train of wheels forming the clockwork, whereby more or less friction or resistance will be obtained, thereby regulating the speed of revolution of the tool. A catch may also be employed, fitted to the case, box, or holder, to temporarily arrest the motion of the clockwork when the apparatus is in the hand of the operator. * * * * *

Although the apparatus hereinbefore described and illustrated by my drawings is especially intended to be used for operating upon teeth whilst in the mouth, it is obvious that by increasing the power of the spring B the same apparatus may be employed in operating upon "pieces" at the work bench.

The Second District Society will deposit this in the museum, in Washington, and it certainly is a valuable donation, being one of the original instruments, a handsome silver-plated and engraved machine, in a velvet-lined walnut box. Moreover, the instrument is still in good working order. It is worthy of note that the points accompanying the device are all drills, and that this ingenious inventor at once realized the need of a right angle attachment, a figure of which is shown.

Now, in what manner can the dental section of
How to Build Up the Dental Museum. the Army and Navy Museum be most rapidly elevated to a position of dignity? Here is the plan to which allusion has been made. Every dentist can find something, or can

construct something that would be of value, if all were part of one collection, a value much greater than it can possibly have in a corner of a cabinet drawer in a private office.

WILL EACH READER OF THIS, WITHOUT DELAY, PERHAPS WITHIN A WEEK OR A MONTH, FORWARD TO THIS OFFICE SUCH A DONATION FOR THE MUSEUM? All such donations will be acknowledged through the pages of *ITEMS OF INTEREST*, and forwarded to Washington. In this manner, and in a single month an imposing dental display would rest in our dental section of the Army and Navy Museum.

**What May
be Sent.**

What shall you send? Perhaps the most important advantage that could have accrued to the whole profession from a dental museum would have been a collection of models explanatory of methods of crown and bridge work. The same will be true of the future. Consequently it would be well if you have an individual method in crown or bridge work, to construct such a crown or bridge with adequate models to show the various steps of the procedure, and send it in. In making such a set of models, remember that future generations will look upon your handiwork, which will bear your name, and be sure that your ghost would not be ashamed. Make all as neat as possible.

2. Regulating models, with devices used in correction.
3. Models of diseased conditions. A long series of models showing bony growths which occur along the median line of the hard palate would be especially interesting, if accompanied by histories to tell whether such growths were attributable to syphilis either of the individual or of the parent. There is a notion among surgeons that this growth is always syphilitic, but this, from the dentist's standpoint, seems doubtful.
4. Models of cleft palates.
5. Anomalous natural teeth. In the museum great care is taken with these specimens. They are properly bleached and each is mounted on a neat stand and held in a metal claw.
6. Microscopic slides, especially sections of malignant disease in the mouth. From these slides large glass "transparencies" are made and swung in cabinets, so that they can be examined with the naked eye by transmitted light.
7. Specimens of fillings.

8. Specimens of artificial dentures.
9. Specimens of anything of interest as recording some feature of dental science and progress.

Let us see how large a list of donations can be reported in our issue.

Dr. Farrar's Second Volume.

The profession will be glad to learn that the second volume of "Irregularities of the Teeth and Their Correction," by Dr. J. N. Farrar, has been published and is procurable. The volume reaches us too late for a review, which will be accorded in a subsequent issue. But the appearance of this book is an incident of too great importance to pass unnoticed. It may be said that this work will be an everlasting monument, of which the first volume is the base, the second, the plinth, and the third, the crowning shaft; moreover, it is a monument which not alone will glorify its author, but likewise will uplift our profession, for by such valuable additions to our literature, is dentistry more certainly established among the sciences. We extend our congratulations upon the issuance of the second, and hope that the third volume, which is already written, will not long be kept out of the publisher's hands.



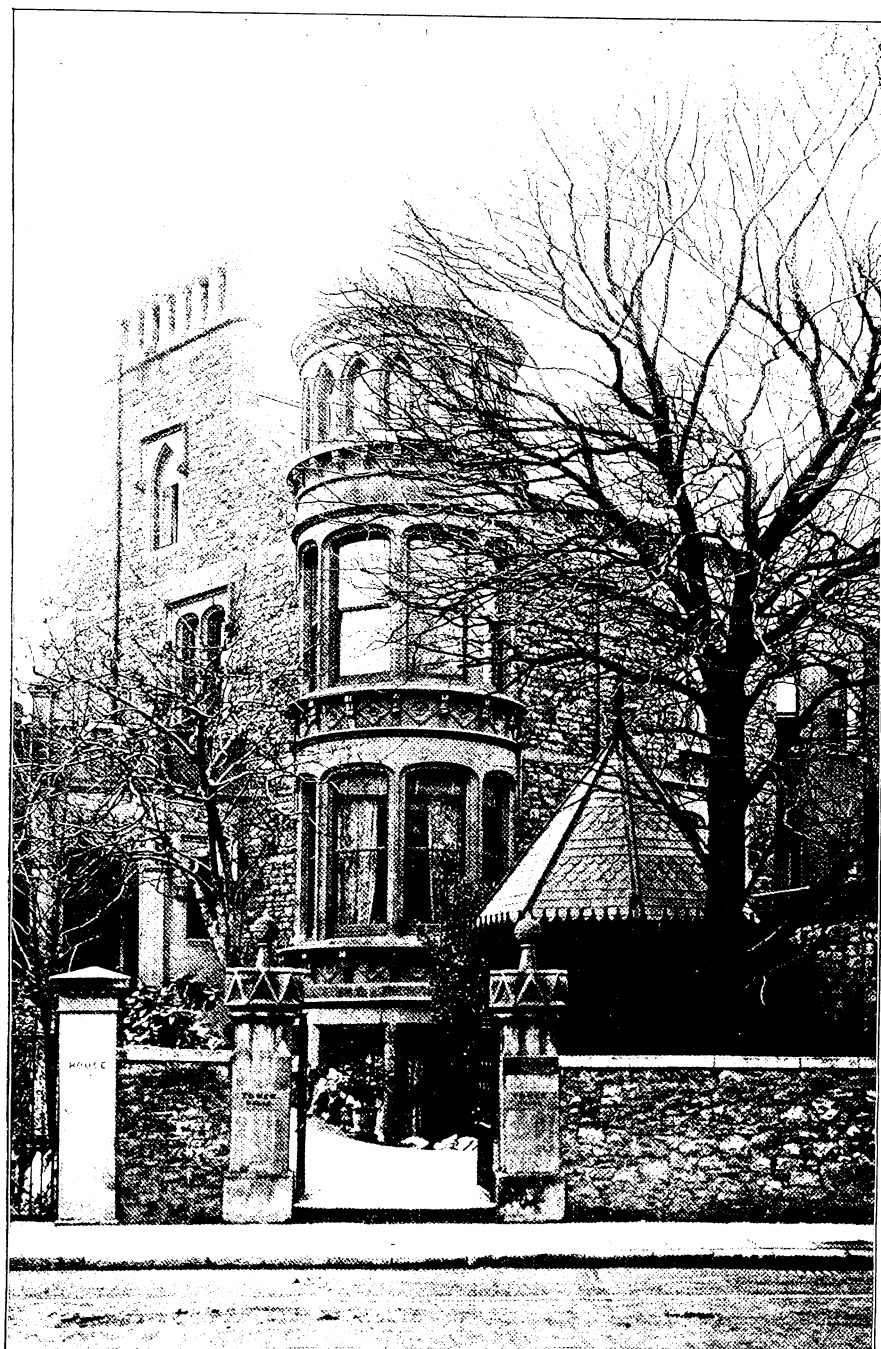


FIG. 1.



Office and Laboratory of Dr. Fielden Briggs, of Clifton, England.

Precisely why it should be is not perfectly clear, but the fact remains that the proportion of good dentists to indifferent ones on the European side of the Atlantic is much smaller than it is upon the American. While America has its fifty colleges turning out upwards of five thousand fresh dentists each year to meet the demands of seventy millions of people, Great Britain amply supplies the whole of the dental attention demanded by its forty million population with a total of five thousand practitioners. That the English as a rule have better teeth than Americans does not wholly account for this. Probably the real solution is that the former do not give anything like the proper attention to their teeth which they ought; nor can this be altogether wondered at when it is considered that the vast majority of British people regards the term dentistry as synonymous with tooth extraction. Why is this? In 1878 an Act of Parliament in the interest of the public made it compulsory on future would-be dentists to first go through a proper college course of instruction. All at that time in business were allowed to register their names and continue to practice. The result was that large numbers of outsiders totally ignorant of dental art or science rushed in, claimed to be dentists and set up for themselves before the curriculum became obligatory. This accounts for the large army of "tooth extractors" and for the small proportion of qualified and skilled dentists. It will be readily seen that much discriminating care is needed in the selection of a dentist by the British public.

One who has spared neither thought nor expense for the benefit of his patients and one of the most advanced on the other side of the water is Dr. Fielden Briggs, whose office and laboratory is illustrated this month. A glance at the first illustration gives an idea of the outer aspect of his place. It is located in the residential quarter of that fine old city of Bristol from whose port Cabot sailed four centuries ago to these shores. The entrance, Fig. 2, is a divided one, the left half being a conservatory

through which air circulates into the operating room, keeping it well ventilated, and cool in summer. The floor is tiled; the windows in the stone work are of stained glass. The door to the right of the pedestal and bust consists of three stained glass windows with a large bronze panel in the lower portion. All the doors in the entrance hall are of solid oak with deeply carved panels. Passing through the hall the reception or waiting room, Fig. 3, is upon the right. Varied colored electric lamps fill the room in dull weather with soft, cheerful light. The aim has been to remove all suggestion of "waiting for the dentist."

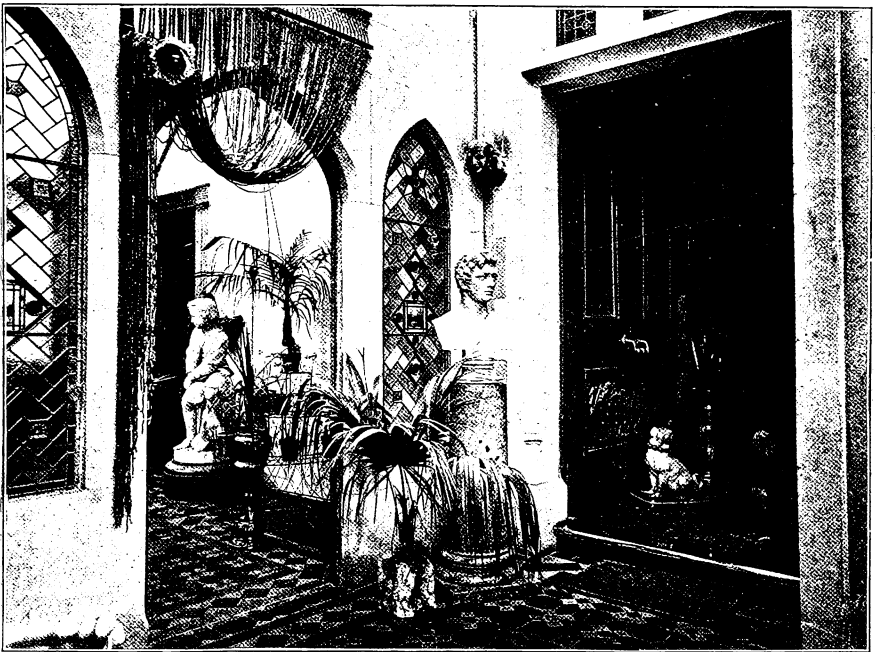


FIG. 2.

The operating room shown in Fig. 4 has an exceptionally fine light. Practitioners in England are at a disadvantage in the matter of light. Unlike us they do not enjoy a clear, transparent, deep blue sky for months together, but instead must be content to work in a dull gray light for days and often are compelled to resort early in the day to artificial light in consequence of fog. This makes it harder work in the finer operations such as gold-filling, and those dentists who persist in high class, conservative work in spite of such and other drawbacks deserve great credit. The operating room is equipped with every modern appliance.

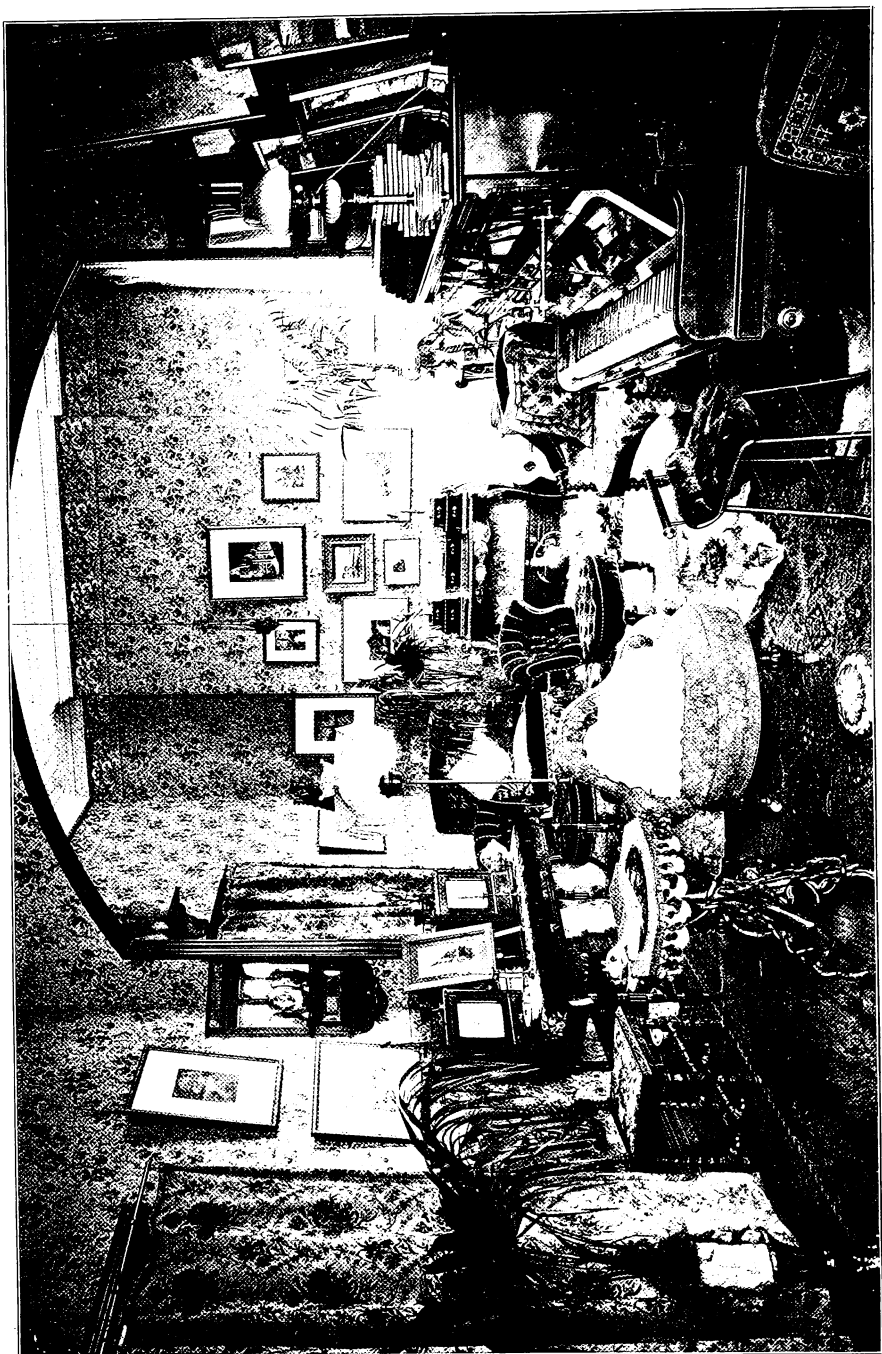


FIG. 3.

The electric mallet and electric cautery are kept in the cabinet upon which the cataphoresis volt selector and milliamperemeter stand. The latter are used by Dr. Briggs principally for obtunding sensitiveness in dentine and for bleaching discolored teeth. Above these instruments are coils for regulating the current supply to the motor on the left of the chair. This motor has a pneumatic clutch which is operated by the foot-press near the stool. By this device the engine is stopped or started instantly at the will of the operator. The fountain spittoon has an extra tank under the floor in connection with it. Much precious metal is thus saved and at

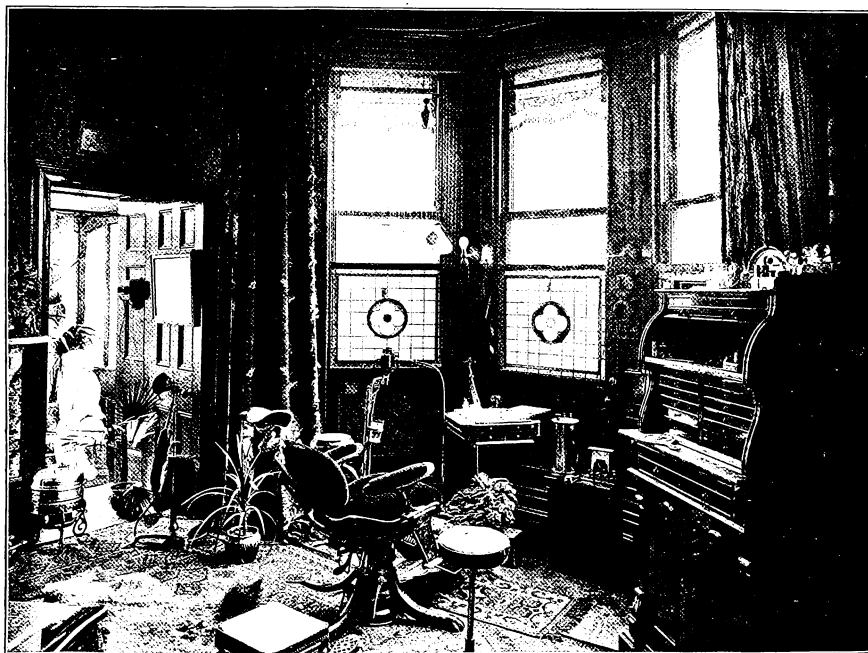


FIG. 4.

the end of the year amounts to a considerable sum. Upon the bracket-table is a gold-annealer and a case containing a set of pluggers for crystal gold-filling. These are used by dentists in various parts of the world and their popularity is shown when it is mentioned that Dr. Briggs received royalty upon over four hundred sets in one year. Another original arrangement is the wash basin to the right of the cabinet. Unfortunately the illustration does not show the whole of this. It is a huge clam shell supported by a bracket from the wall and looks more artistic than an ordinary wash basin. Instead of having a plug to let out the

used water, the pipe is bent upward so that when the water rises to a certain height in the shell it immediately syphons away. Below the telephone is the nitrous oxide apparatus. The flow of gas out of the bottles into the bag is regulated by the foot. Further to the left is a stove which serves the double purpose of heating the room and purifying the air, as well as destroying, to a great extent, the odors of the drugs. Suspended above the chair and to the right and left of it are seen electric lights useful for dark or short days. Over the bracket are the electric mouth

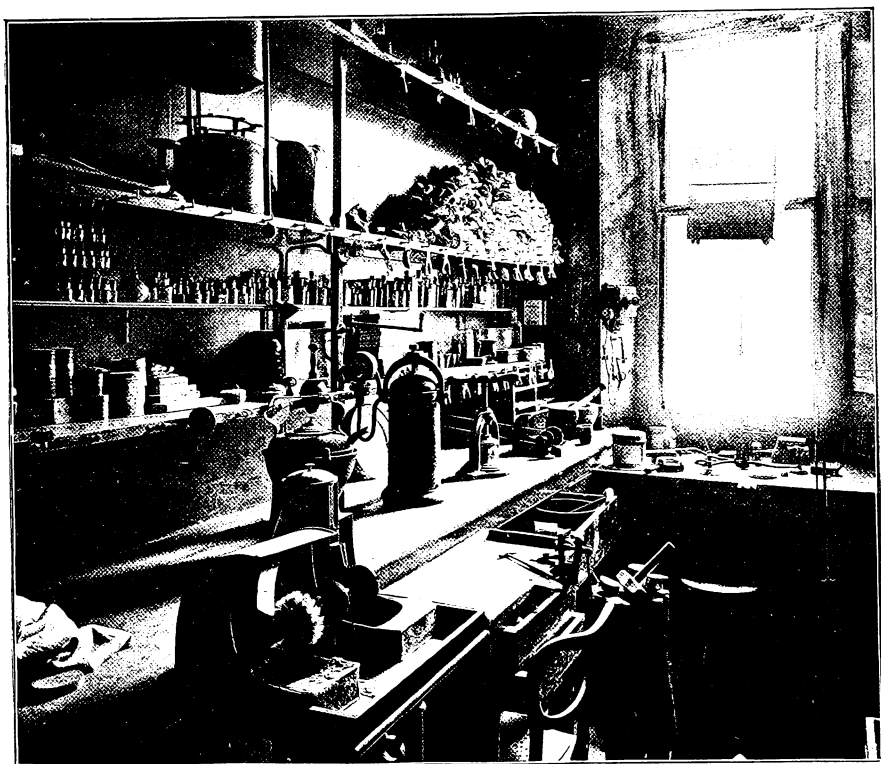


FIG. 5.

mirror and hot air syringe. Underneath the chair is an electric button. By a system of signals operated by the foot the assistants are communicated with.

Besides the laboratory, of which a corner is shown in Fig. 5, there is another one upon the lower floor with plaster benches, Tees furnace for continuous gum and porcelain work, etc. It was fitted up especially

for the manufacture of crown and bridge work. All the rooms are connected with each other by telephone.

The office, Fig. 6, is for the business part of the practice. By having this upon a system everything is done in regular order without chaos, and much valuable time is saved. The roll-top desk is fitted with pigeon holes in which are severally kept, blank appointment cards, bill heads, notepaper, envelopes and such material. The system of bookkeeping in use is very simple and effective. An appointment-book has each folio divided into six sections, one for each day of the week. Each section is



FIG. 6.

ruled into spaces for name, address and operation, amount of fee, amount paid. At periods, such as the end of each day or week, these entries are transferred to the "Comprehensive Case and Account Book." This was published some years ago by Dr. Briggs and his brother and gives a separate page for each patient containing a full record of every case seen at a glance. The correspondence is quickly disposed of in a way which has probably not yet been adopted by any other dentist. The letters when received are first filed and then the batch is taken one by one and

answered into the phonograph. The secretary afterwards writes the answers upon the typewriter from the dictation of the phonograph. This plan effects a saving in time of about two-thirds. The typewriter is also used for the preparation of articles. The following quotation is from a communication to Dr. Briggs written by Dr. Evans soon after he located in Paris, which sentiment Dr. Briggs indorses: "I have but little to impart, yet that little is at the service of each and all members of my profession; and gladly would I hail the day that should make all that is sound in science and valuable in art common property. . . . By the discussion of subjects connected with the profession and by the contribution of each according to his ability, by the comparison of the different modes of practice and the making known all new discoveries and improvements, we shall place the profession on more commanding ground, and better serve the generation in which we live."



The Editor's Corner.

It is easier far to criticise than to do better. This is especially true as applied to critics of literature. Book reviewers who assail the pro-



ducts of all successful writers, wielding a sword for a pen, and using blood instead of ink, are not infrequently literary hacks, penny-a-liners, who have never themselves written books, or else never have produced any in which publishers would invest. Failures themselves, they set up as critics forsooth, and tell us how badly other men write. We have a few of this ilk in the dental world. Men who, being incapable of advancing dental literature by original work, loiter about in dental offices, attend dental meetings, often uninvited and more often unwelcome, and grovel through the current numbers of the journals, seeking material out of which to formulate letters, which usually contain scurrilous or scandalous, or libelous statements, often aimed against particular persons who happen to have gained the ill will of these ill wishing creatures. It is noteworthy that these "letters" are anonymous, the writers preferring a pseudonym. It is a little bit funny that the *Dental Digest*, which has made a special "feature" of this questionable class of "dental literature" (in order to fill its pages without too liberal a use of shears and mucilage), should have allowed one of its anonymous correspondents to attack a "feature" of any other dental magazine. "Residents in vitreous buildings should hesitate to discharge lithological missiles." We are quite willing that thinking dentists should compare the relative value of our department of "Office and Laboratory" with the department of "Anonymous Correspondence" found monthly in the *Dental Digest*.

The criticism against our department of "Office and Laboratory" appeared several months ago, and would have received no attention were it not that the *Dental Weekly*, by clipping the matter from the *Digest*, has given it an extended circulation.

**Department of
Office
and Laboratory.**

The anonymous writer in the *Digest* admits the possible usefulness of the articles, which we have published, descriptive of offices, but is fearful of two things. First, he is afraid that by showing the apartments of "millionaire dentists" jealousies may be aroused, and bad feeling engendered. The gentleman may rest easy in his mind. We have shown no "millionaire dentist's" offices, though we would gladly do so if such a man exists in this country. The richer a dentist has grown, *making his fortune out of dentistry*, and the more luxurious his surroundings, the more anxious are we to obtain a description of his environment. Who can deny that one of the most powerful incentives in this life's work is the conspicuous examples of success, financial success, that have been achieved along pathways similar to those which the struggling aspirants are treading? The successes of our great men have an ennobling influence and buoy the hopes even of the most discouraged. If a picture of a handsome office makes a young dentist envious, he is not a worthy member of the fraternity, and this magazine is not catering to his tastes, though striving for his betterment if such be possible.

Furthermore, it being a fact that offices of really poor men have been described, as well as one or two of men who, after long years of toil, are jogging along "easy-street," with little hope of turning into "luxury lane," it should also be remembered that interiors look better in *pictures* than in actuality.

The second, and most vicious, criticism is that the descriptions of men's offices is a species of "advertising." Is it so? The writer first says that these articles tend to create jealousies, and then claims, to the contrary, that they advertise the man. *An advertisement which makes the reader envious will not bring the advertiser much profit.*

Perhaps the anonymous writer half suspected that he was contradicting himself, for he goes on to explain that a dentist of his acquaintance, having left a copy of *ITEMS OF INTEREST* on his waiting room table, found a patient reading it, and the patient's comment was that "the owner of such offices must be a fine dentist." Then he argues that in this way patients would be tempted to leave their own dentist and transfer their allegiance to the man with the fine offices. This is so specious that it is laughable. If such an effect would ensue, and if, as he tells us, the dentist himself was made envious when he read the article, is it conceivable that he should leave a technical journal on his reading table in his waiting room, where his patients may read it? If he does so, whose fault is it if the man with nice offices gets an advertisement? Who placed the advertisement in the hands of the patients?

But if a patient could be attracted to a dentist, merely by seeing a *picture* of his offices, how much more would he be attracted by entering such a place? And this brings us to the original purpose of the department.

Heretofore the magazines have catered almost exclusively to the scientific side of the dental profession, saying little about the business side, or the causes which lead to financial success. Dentists are proverbially poor business men. It is probable that the majority of dentists, in fitting up their offices, seek to surround themselves with what will aid in their work, and that very few ever stop to think that the very appearance of the rooms may bring them the work to do. As proof of this could be cited an instance of a dentist who refurnished his offices, rearranging them in handsome style, and making them *more comfortable for his patients*, though purchasing nothing new in the line of instruments or apparatus for his own convenience. During the year succeeding, though he had enjoyed a long established practice, *his income was increased nearly fifty per cent.*

The department is intended to supply our readers with ideas in office arrangement and furnishing. It is not intended as an advertisement for any one, *nor is it probable that any dentist who has described his offices in these pages, has increased his income by so much as one dollar.* But it is a fact that in nearly every instance, hundreds of letters of inquiry as to further details, have caused these gentlemen in a measure to regret that the articles had been published, because of the subsequent correspondence entailed. It is also a fact that very many offices have been remodeled in part from the descriptions given. In short, from a thousand sources, we are enabled to positively state that with the great majority of our readers "Office and Laboratory" is the most popular department of ITEMS OF INTEREST.

One more comment may be made on the charge that this is advertising. Advertisements are usually paid for by the advertisers. *None of the contributors to this department has paid a penny towards the expense of publishing and illustrating the articles. On the contrary, the dentists of the whole world are cordially invited to give our readers a glimpse at their sanctums, with technical descriptions of the same.*

A single word more in passing from the subject. Dr. William W. Belcher, in an article published in the March issue of this magazine touches on this subject, and suggests that the articles though of great interest, might have the names of the dentists omitted. We cannot agree with this. There is just as much reason for publishing the names of the dentists whose offices we describe, as for giving the names of the authors of the other articles. Moreover, it is certain that the "scientific article," especially when reprinted, is more of an advertisement, than any descrip-

tion of office or laboratory. It may be stated as a rigid rule, that no anonymous communications of any kind will be published in ITEMS OF INTEREST.

**A Few
Practical
Suggestions.**

Dr. E. B. Edgars, of Waterloo, Iowa, offers the following as "useful hints:" "It is very annoying to vulcanize a thick plate, and have it come out porous. This may be avoided by packing pink rubber in the center of the thickest places. The plate will be as tough and strong as though all of red or black rubber, and will have no holes in it. Care should be observed to cover the pink rubber so that it will not reach the surface when the plate is polished. Second. Formalin, full strength, applied on a pellet of cotton to an exposed pulp will stop toothache when all else fails. Third. To mend broken models or impressions use oxy-phosphate cement, mixed to the consistency of cream, and apply to the broken parts. In uniting the pieces be sure to squeeze out all excess. Let it harden thoroughly and one would never know that the piece had ever been broken."

This method of repairing broken plaster is not as good as the following. Drop half a teaspoonful of fine plaster on the rim of a plate, and flow a little water into the plate so that the plaster is soaked. Take a fine camel's hair pencil and dip up the wet plaster almost as thin as the water itself, and smear this over the crack when the broken parts are placed together. The water soaks into the model and the moist plaster enters the crack, firmly reuniting the parts when thoroughly hardened. It is best to chip out tiny fragments along the edges of the broken pieces so as to afford a little space in which the new plaster may find lodgment. Not only may repairs be effected in this manner, but even lost parts of teeth may be restored, with a little deftness and a knowledge of tooth shapes. Suppose that a corner of a tooth should be broken from a record model of a regulating case. With plaster added with the camel's hair brush bit by bit the shape of the tooth may be contoured and fully restored. This method was given to the profession many years ago by Dr. Norman W. Kingsley, yet curiously enough dentists are still repairing models with shellac, hard wax, oxy-phosphate, etc., which seems ludicrous to one who has followed his advice.

**New
Dental
Journals.**

Within the last few months a new dental journal was added to the growing list of periodicals devoted to our specialty. The *American Dental Weekly*, is published in Atlanta, Georgia, and is edited by Dr. Catching, widely known in connection with his popular "Compendium." Dr. Catching has a corps of brother editors, all of whom together, make the most imposing editorial staff connected

with dental literature. It is worthy of note, however, that these gentlemen are not "imposing editorial stuff" upon their rapidly growing list of readers, but on the contrary, are filling their pages with many practical bits of good advice and good practice culled from their personal experiences.

There is no good reason why dentistry should not, like medicine, have weekly periodicals, and we sincerely wish these gentlemen success as pioneers in the field.

A new monthly also has appeared, the *Indiana Dental Journal*. Two numbers of this magazine have reached us and the second is an improvement over the first, just as the first is a step in advance of many of the old journals. ITEMS OF INTEREST may almost be called a new journal, since it adopted its present appearance, and we congratulate Dr. Hunt, the editor of the *Indiana Dental Journal*, upon following our example and giving his pages some "style." We are very glad to welcome Dr. Hunt also into the editorial world and prophesy that he will be as successful in this field as in others which have known his presence.

A third new dental journal is called *The Dentist*, and comes from England. It calls itself an "Independent Journal," which is true in one respect, at least. It seems to be managed independently of the rights of others. The February number (Vol. I, No. 2) contains matter taken from American journals without giving credit for the same. The large X-ray picture of a child's head, made by Dr. Morton, and published in ITEMS OF INTEREST last year, is reproduced and part of the text is published, not only without credit to this magazine, but without mention even of the author's name. Moreover, four smaller X-ray pictures which have appeared in this magazine are printed in the body of the article, with which they have no connection whatever, and there they appear without relevancy or explanation. It is hoped that this is merely an oversight, which may be true, as an article relating to the late Dr. Evans is used with credit to ITEMS OF INTEREST. There is another possible explanation. The magazine has no editorial, and no editor is named. Perhaps they have none, and while looking for one, the journal is arranged by the printer's devil. Let us hope that an editor will be found soon.

**A Novel Idea
for a
Dental Meeting.**

The summer approaches, and already announcements of State Society meetings are ready for publication. During the warm months we shall have dental meetings in the north, dental meetings in the south, dental meetings in the east, dental meetings in the west, dental meetings throughout the country, and most likely the great majority of them will be of the same monotonous sort that we have all enjoyed (?) so many times, so very many times, in the past. These

meetings will begin with prayer, and be followed by red tape and politics, with a flavoring, a slight flavoring, of scientific discussion, and a few clinics of more or less interest, usually less.

The announcement of the meeting to be held by the Southern Minnesota Dental Society, published in this issue, offers a refreshing departure from the usual rut, and it would seem that our Minnesota friends have originated something worthy of imitation throughout the country. Their meeting is to be a "three days school of crown and bridge work," for a full comprehension of which the reader should consult the announcement. Crown and bridge work is of comparatively recent date. Many first-class dentists are in active practice who graduated long before such work was taught. These men have been obliged to cull what knowledge they have from the periodicals and crowded clinics. They have had no such systematic instruction as the young graduate of today receives. It will therefore be especially advantageous to this class of men to attend the Minnesota meeting. But the latest and best methods have been evolved only within the last two or three years, so that even those who did receive instruction at college may find that they can learn something at such a meeting as this promises to be.

Correction.

In the article entitled "Volasem an Antidote to Cocaine," published in the March issue, an error appears on page 181. The word "hypodermatically" should have been omitted.

**New Dental
Law of
New Jersey.**

1. The following persons only shall be deemed licensed to practice dentistry in this State:

- (a) Those who are now duly licensed and registered as dentists pursuant to law, and
- (b) Those who may hereafter be duly licensed and registered as dentists pursuant to the provisions of this act.

2. The members and officers of the State Board of Registration and Examination in Dentistry, as now constituted pursuant to chapter one hundred and forty-three of the laws of eighteen hundred and ninety, may continue to hold office until the expiration of their terms, unless previously removed.

The New Jersey State Dental Society shall, at each of its annual meetings, recommend to the Governor for appointment as a member of said Board a dentist of good repute, residing and practicing in this State, whom the Governor shall appoint; the member so appointed shall hold office for five years, or until his successor is appointed. The Governor shall also fill, for the unexpired term only, vacancies occurring in the Board by reason of death, resignation or otherwise. Cause being shown before him, he may remove a member from office upon proven charges of inefficiency, incompetency, immorality or professional misconduct.

The Board shall, at its annual meeting, elect from its members a president and secretary. It shall hold at least two meetings annually for examining and licensing persons to practice dentistry in this State, at which meetings three members shall constitute a quorum. Said Board shall have the power to determine the good standing and repute of any dental school, college, or department of a university, and may from time to time designate in some public manner schools, colleges, or departments of universities whose diplomas will be received by it. It shall annually make a report of its proceedings to the Governor.

The seal heretofore adopted by it shall continue to be the common seal of the Board. It may sue or be sued, and in all actions brought by or against it, the Board shall be designated as "The State Board of Registration and Examination in Dentistry."

3. The Board shall, from time to time, adopt rules for its own government, and for the examination of candidates for license to practice dentistry. Any rule altering the nature or increasing the severity of the examination or the subjects to be included therein, shall not be enforced within six months after its adoption and public promulgation. The examination of applicants shall be confined to written or oral, or both written and oral, examination upon subjects properly relating to the science of dentistry, the knowledge of which is necessary to the proper and skilful practice of said science. The Board may also require from applicants, as part of the examination, demonstrations of their skill in operative and mechanical dentistry.

No person shall be examined by the said Board unless he be twenty-one years of age, of good moral character, and having received a preliminary education equal to that furnished by the common schools of this State, and be graduated in course with a dental degree from a dental school, college, or department of a university recognized by said Board; or unless he shall present the written recommendation of at least five licensed dentists of this State, of five years' standing, that he is qualified for such examination; or shall hold a diploma or license conferring full right to practice dentistry in some foreign country and granted by some authority recognized by the Board. Any member of the Board may inquire of any applicant for examination concerning his qualifications, and may take testimony of any one in regard thereto, under oath, which he is hereby empowered to administer.

**Examination
Fees.**

4. Every applicant for license to practice dentistry shall file his application with and pay to the secretary of said Board a fee of twenty-five dollars, and present himself for examination at the first regular

meeting of the Board after such application, due notice of which shall be given. Such fee shall not be refunded, unless from sickness or other good cause appearing to the satisfaction of the Board such applicant was prevented from attending and completing such examination. Further or subsequent examinations under such application may be given to applicants in the discretion of the Board without payment of additional fee.

5. The Board may cause to be paid out of the fees, fines and penalties had and received by its secretary all proper expenses incurred by it under the provisions of this act, including mileage to each member at the rate of five cents per mile for all distances necessarily traveled in discharge of his duties, and an annual salary of one hundred dollars to its secretary; all moneys received shall be held by the secretary and paid out only upon resolution of the Board and warrant of its president; the secretary shall give bond in such sum and with such surety as the Board may from time to time direct and approve. A statement of all moneys received and disbursed by the Board shall be annually submitted to the Governor in the annual report of said Board, and the surplus, if any, after payments as aforesaid, shall be paid to the State Treasurer.

Licenses. 6. Said Board shall register as licensed dentists, and under its seal and the hand of its president and secretary, issue to all persons who shall successfully pass said examination, its license to practice dentistry in this State. The Board may also, without the examination hereinabove provided for, issue its license to any applicant therefor who shall furnish proof satisfactory to it that he has been duly licensed after examination to practice dentistry in any State after full compliance with the requirements of its dental laws, and has been lawfully and reputably engaged in said practice for five years next preceding his application; *provided, however,* that his professional education shall not be less than that required in this State; every license so given shall state upon its face the grounds upon which it is granted, and the applicant may be required to furnish his proof upon affidavit. The fee for such license shall be fifty dollars.

**Revocation
of
Licenses.** 7. Upon presentation to the Board of a certified copy of a court record, showing that a practitioner of dentistry has been convicted of felony or misdemeanor, that fact shall be noted upon the record of licenses, and the license and registration shall be marked cancelled; any person whose license shall be so cancelled shall be deemed an unlicensed person, and, as such, subject to the penalties prescribed for other unlicensed persons who practice dentistry.

8. This act shall not be construed to prohibit an unlicensed person from performing mechanical work upon inert matter in a dental office

or laboratory; or to prohibit the registered student of a licensed dentist from assisting his preceptor in dental operations while in his presence and under his direct and immediate personal supervision; or to prohibit a duly licensed physician from treating the diseases of the mouth or performing operations in oral surgery; nothing in the provisions of this act shall be construed to permit the performance of dental operations by any unlicensed person under cover of the name of a registered practitioner.

Any person now registered as a student may present himself for examination to the Board upon complying with the provisions of this act relative to examination, and presenting to the Board a certificate, under oath from the dentist or dentists with whom he has studied, that such applicant has studied as a student with the dentist or dentists so certifying for not less than five years continuously; *provided, however*, such applicant shall have filed on or before the first day of June, eighteen hundred and ninety-eight, a notice with the Board that it is his purpose to avail himself of the exemption hereby made. The Board may, however, at any time, upon proof of the violation of any of the provisions of this act by such student, revoke his right to present himself for and pass such examination.

Any person shall be regarded as practicing dentistry within the meaning of this act who shall use the words, "Doctor of Dental Surgery," "Doctor of Dental Medicine," or the letters "D. D. S." or "D. M. D." in connection with his or her name, or any other title intended to imply or designate him or her as a practitioner in dentistry in all of its branches, and who, in connection with such title or titles, or without the use of such titles, shall practice dentistry in any of its branches; and it is further provided that the use of any one of the aforementioned titles or the exposition of a sign, circular, advertisement or any other device or information indicating thereby the occupation of the person or persons, shall be taken and considered in the trial of any indictment which may be found for the violation of any of the provisions of this act as *prima facie* evidence.

9. That hereafter if any association or company of persons, whether incorporated or not, shall engage in the practice of dentistry under the name of "company," "association," or any other title, the said company or association shall cause to be displayed and kept in a conspicuous place at the entrance to its place of business the names of each and every person employed by said company or association in the practice of dentistry; and any person employed by such company or association whose names shall not be displayed as above provided, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished as herein-after provided; and the said association or company if incorporated, or the persons comprising the same if not incorporated, shall for such failure

to display the aforesaid names be guilty of a misdemeanor, and upon conviction thereof, shall be punished as hereinafter provided.

**Annual
Registration.**

10. That hereafter there shall be an annual registration of every person, persons, company or association practicing dentistry within the State, together with an annual registration of each and every assistant in the employ of every such person, persons, company or association. It shall be the duty of the secretary of this Board not later than the first day of December, in each year, to prepare and mail to every person, company or association known to be practicing dentistry within this State a document to be known as the "Annual Registration Blank," upon which shall be proper space for the endorsement of the name, residence, and location of office, of the person, company or association to whom the same is sent, together with the name and residence of every assistant employed in any such office; and it shall be the duty of every person, company or association upon the receipt of said blank to fill in the name, residence, and location of office, of said person, company or association, and also the name and residence of each and every assistant employed by said person, company or association in any such office; said return shall be fully completed and returned to the secretary of this Board within thirty days after its receipt; for failure to comply herewith the person, company or association shall be liable to a fine of ten dollars, besides costs, to be sued for in the name of the Board, in any court of competent jurisdiction; said fine to be paid into the treasury of the Board; and any person, company or association making any false statement concerning or touching any matter or thing covered by this section shall for such offense, be liable to a fine of fifty dollars, besides costs, for each and every offense, to be sued for in the name of said Board in any court of competent jurisdiction; said fine to be paid into the treasury of said Board.

11. That hereafter it shall be the duty of every person, company or association practicing dentistry within this State, upon demand in writing made by the secretary of this Board, to furnish, within thirty days after said demand to the State Board through its secretary, the name and address of each and every person practicing dentistry or assisting in the practice thereof, in the office of said person, company or association, together with a statement showing under and by what license or authority the said person, company or association is practicing; for failure so to do the said person, company or association shall be liable to a fine of ten dollars, besides costs, to be sued for in the name of the board in any court of competent jurisdiction, said fine to be paid into the treasury thereof; and any person, company or association making any false statement concerning or touching any matter or thing covered by this section,

shall for such offense be liable to a fine of fifty dollars, besides costs, for each and every offense, to be sued for in the name of said Board in any court of competent jurisdiction, said fine to be paid into the treasury of said Board.

**Penalties and
Fines.**

12. Any person, company or association, practicing or holding himself or itself out to the public as practicing dentistry, not being at the time of said practice or holding out legally licensed to practice as such in this State, shall be guilty of a misdemeanor and punishable upon conviction of a first offense by a fine of not less than fifty dollars, and upon conviction of a subsequent offense by a fine of not less than one hundred dollars, or by imprisonment of not less than two months, or by both fine and imprisonment.

13. Any person, company, or association, for failure to comply with each and every provision and condition contained in the ninth, tenth and eleventh sections of this act shall be guilty of a misdemeanor, and upon conviction thereof shall be punished with a fine of not less than five hundred dollars, or by imprisonment of not less than six months, or by both fine and imprisonment.

14. Any person, company or association shall be guilty of a misdemeanor, and upon every conviction thereof shall be punished with a fine of not less than five hundred dollars, or by imprisonment for not less than six months, or by both fine and imprisonment, who

(1.) Shall sell or barter, or offer to sell or barter, any diploma or document conferring, or purporting to confer, any dental degree, or any certificate or transcript made, or purporting to be made, pursuant to the laws regulating the license and registration of dentists; or

(2.) Shall purchase or procure by barter any such diploma, certificate or transcript with intent that the same shall be used as evidence of the holder's qualification to practice dentistry, or in fraud of the laws regulating such practice; or

(3.) Shall with fraudulent intent, alter in a material regard any such diploma, certificate or transcript; or

(4.) Shall use or attempt to use any such diploma, certificate or transcript which has been purchased, fraudulently issued, counterfeited or materially altered, either as a license or color of license to practice dentistry, or in order to procure registration as a dentist; or

(5.) Shall practice dentistry under a false or assumed name; or

(6.) Not being now duly licensed and registered as dentist, shall assume the degree of "Doctor of Dental Surgery," or "Doctor of Dental Medicine," or shall append the letters "D. D. S.," or "D. M. D." to his or her name, not having had duly conferred upon him or her by diploma

from some college or school legally empowered to confer the same the right to assume said titles; or shall assume any title or append any letters to his or her name with the intent to represent falsely that he has received a dental degree or license; or

(7) Any person who, in any affidavit or examination required of an applicant for examination, license or registration under the laws regulating the practice of dentistry, shall make wilfully a false statement in a material regard, shall be guilty of a high misdemeanor, punishable upon conviction thereof by a fine not exceeding five hundred dollars, or by imprisonment at hard labor not exceeding five years, or both at the discretion of the court.

15. All fines, penalties or forfeitures imposed or collected for the violation of any of the foregoing provisions of this act, shall be paid as follows: one-half thereof to the county collector of the county in which the prosecution is had, and one-half thereof to the secretary of this Board, to be held, disposed and accounted for by him as hereinabove directed; and it shall be the duty of the county collector of each county, upon receipt by him of any such fine, penalty or forfeiture, to forthwith pay over to the secretary of this Board, one-half of the same. Said board or any member or officer thereof may prefer a complaint for violation of the law regulating the practice of dentistry before any court, tribunal or magistrate having jurisdiction, and may by its officers, counsel and agents aid in presenting the law or facts before said court, tribunal or magistrate in any proceeding taken thereon; and it shall be the duty of the prosecutor of the pleas of the counties of this State to prosecute all violations of the aforesaid provisions of this act.

**Additional
Fines and
Penalties in
Civil
Proceedings.**

16. In addition to all of the fines, forfeitures and penalties hereinabove provided for, it shall be lawful for the said Board to institute civil proceedings in any court of competent jurisdiction against any person, company or association for the violation of any of the provisions of this act; such proceeding shall be brought in an action in debt, and, upon conviction thereunder, the person, company or association so convicted shall be liable to a fine, which shall be the same amount fixed in the section of this act, for violation of which the suit shall have been brought; and all fines and penalties collected by any court under the provisions of this section of this act shall be paid over to the secretary of this Board, to be received and disbursed by him in accordance with the provisions of this act.

17. The following laws are hereby repealed, to wit: Chapter two hundred and sixty of the laws of eighteen hundred and seventy-three;

chapter twenty of the laws of eighteen hundred and eighty-four; chapter one hundred and forty-three of the laws of eighteen hundred and ninety, and chapter forty-four of the laws of eighteen hundred and ninety-four.

18. This act shall take effect immediately.

(Signed)

March 17, 1898.



Dr. Joseph R. Woodley.

Whereas, It has pleased Almighty God to remove from his work on earth to his reward in heaven our friend and co-laborer, Dr. Joseph R. Woodley, of Norfolk, Va., a most highly esteemed honorary member of this society; one who had adorned our profession for over forty-three years; who had been the unfailing friend and wise counsellor, to whom we were wont to look for advice and assistance; whose time and purse were always at the disposal of the profession he loved so well; whose unflinching courage and integrity made the charlatan and pretender quail before him; whose skilful manipulation combined with genuine sympathy made him the idol of his patients; whose kindly advice, helping hand and generous heart have assisted many competent and worthy young men to positions of usefulness in our profession; whose labors for the elevation of the profession to a higher plane have done so much towards securing better educational advantages for those entering the profession; therefore,

Resolved, That in the death of Dr. Joseph R. Woodley we have lost a beloved friend and fellow worker whose life has been a noble example to us; that while we bow with submission under the hand of our Heavenly Father who has afflicted us, we will strive to emulate his Christian faith and virtues, manly courage and conscientiousness; trusting that we may by faith in the Saviour whom he loved and served, be permitted in God's own time to join him in the mansions above;

Resolved, That these resolutions be published in the dental journals, and that the secretary be instructed to forward a copy to the family of our deceased friend, with whom we so deeply sympathize.



Southern Minnesota Dental Society.

The thirteenth annual meeting of the Southern Minnesota Dental Society will be held at Mankato, April 12, 13 and 14, 1898, at The Saulpaugh.

Announcement.

At the close of the meeting in April, 1897, a vote was taken to determine the lines of work to be pursued at the 1898 meeting. The vote was practically unanimous in favor of Crown and Bridge Work, and a committee was appointed, with authority to select instructors and power to make all necessary arrangements.

In accordance with the plan adopted, the committee takes pleasure in announcing that the arrangements are complete for the most instructive meeting ever held by this society.

The meeting will be conducted by Dr. F. B. Kremer, assisted by Drs. C. M. Bailey and I. C. St. John, of Minneapolis, and Drs. M. O. Nelson and W. A. Moore, of St. Paul, as instructors and clinicians, and will be a

Three Days' School of Crown and Bridge Work.

Every facility to insure success will be provided. The corner parlor at The Saulpaugh will be provided with the necessary tables, chairs, gas and electric fixtures, and all the work will be done in the room.

As the meeting is to be strictly a working meeting, cards will be issued to confine the attendance to workers. The cards will be issued as follows: 1st. To members as they pay their dues. 2nd. To gentlemen in the territory covered by the society, who are eligible to membership, upon payment of \$2.00. 3rd. To gentlemen outside of the territory, who are eligible to membership in any ethical dental society, upon payment of \$2.00.

The method of imparting instruction will be entirely new and will be very effective.

Models of bridge cases that have been recently completed, or that are contemplated, should be mounted in Bonwill articulators and presented at the meeting for discussion.

Every gentleman in attendance will be expected to make two crowns at the meeting.

Be sure to bring all crowns and bridges that have failed. It is our failures that need the discussions, our successes will take care of themselves.

There will be a large display of properly constructed crowns and bridges, also a large display of "the other fellows' failures," with as much of their history as is obtainable. In order to get the full benefit of this meeting you must be here to start in at 9 o'clock on Tuesday morning and stay till 3:30 Thursday afternoon.

A list of instruments and material to bring is given below:

Programme.

Tuesday, April 12th.

9:00 a. m.—Meeting called to order. Roll call. Paying dues. Reading minutes of last meeting. President's address. Discussion.

11:00 a. m.—Outline of Work, Kremer.

12:00 m.—Adjournment.

1:30 p. m.—Clinics—All Porcelain Crown, Bailey. New Method of Banding Logan Crown, Kremer.

3:30 p. m.—Technics, by the class. Subject—New Method of Banding Logan Crowns.

6:00 p. m.—Adjournment.

8:00 p. m.—Paper, Bailey. Subject—Stress and Occlusion with Special Reference to Crown and Bridge Work.

Wednesday, April 13th.

9:00 a. m.—Technics of previous day will be completed.

11:00 a. m.—Baking Porcelain Crowns.

12:00 m.—Adjournment.

1:30 p. m.—Clinics—Gold Shell Crown, Carved Occlusion, Nelson. Porcelain Faced Bicuspid Crown, Moore. Removable Porcelain Faced Bicuspid Crown, St. John.

3:30 p. m.—Technics, by the class. Subject—Removable Porcelain Faced Bicuspid Crown.

6:00 p. m.—Adjournment.

8:00 p. m.—Illustrated paper, Kremer. Subject—Crown and Bridge Work.

Thursday, April 14th.

9:00 a. m.—Technics, by the class. Subject—Removable Porcelain Faced Bicuspid Crowns.

12:00 m.—Adjournment.

1:30 p. m.—Technics of the morning continued.

2:30 p. m.—Election of officers. Adjournment.

What to Bring.

Dental engine, carborundum stones, drills for enlarging root canals, one pair case enamel scalers, one pair Peeso collar pliers, one pair flat nose pliers, one mouth blowpipe, one plate shears, one borax slate, one hand mallet, one set band-drivers, one flat and one half-round gold file, several bicuspid teeth, for rubber work; 22 K. gold plate for bicuspid crown, 30 g.; platinum plate for one crown, 30 g.; platinum wire for dowel pins, pure gold plate or foil scraps for solder, 18 and 20 K. solder.

Make impression of upper set of teeth. Select natural central incisor and first bicuspid. Place them in their proper positions in the impression. Pour model and make articulating model. Mount in Bonwill articulator.

The Dental Society of the State of New York.

The Dental Society, State of New York, thirtieth annual meeting, Albany, May 11 and 12, 1898.

Papers will be presented by the following members of the profession:

- M. W. Foster, M.D., D.D.S., Baltimore, Md.
- M. H. Cryer, M.D., D.D.S., Philadelphia, Pa.
- J. S. Marshall, M.D., D.D.S., Chicago, Ill.
- I. N. Broomell, D.D.S., Philadelphia, Pa.
- S. S. Stowell, D.D.S., Pittsfield, Mass.
- E. A. Shillinger, D.D.S., Dalton, Mass.
- R. Ottolengui, M.D.S., Correspondent.
- L. C. Le Roy, D.D.S., Committee on Practice.

All members of the profession are cordially invited to attend and participate in the exercises commemorative of the occasion.

H. J. BURKHART, President.

C. S. BUTLER, Sec'y, Buffalo, N. Y.

Southern Wisconsin Dental Association.

The fourth annual meeting of the Southern Wisconsin Dental Association will meet at Dodgeville, Wis., Wednesday and Thursday, May 4 and 5, 1898.

A cordial invitation is extended to the profession at large to meet with us.

Dr. W. J. FUNSTON, Pres., Platteville.

J. H. REED, D. D. S., Sec., Lancaster.

Kansas State Dental Association.

The twenty-seventh annual meeting of the Kansas State Dental Association will be held at Topeka, May 10, 11 and 12, 1898. An interesting program is being prepared. Members of the profession are invited to attend and participate in proceedings.

EDWARD BUMGARDNER, Sec'y,
Lawrence, Kans.

Iowa State Dental Society.

The annual meeting of the Iowa State Dental Society will be held in Des Moines, May 3, 4, 5, 6, 1898.

WILLIAM GILMORE CLARK, Sec'y.
Cedar Rapids, Iowa.

West Virginia State Board of Dental Examiners.

The West Virginia State Board of Dental Examiners will meet in Parkersburg, April 21, 1898.